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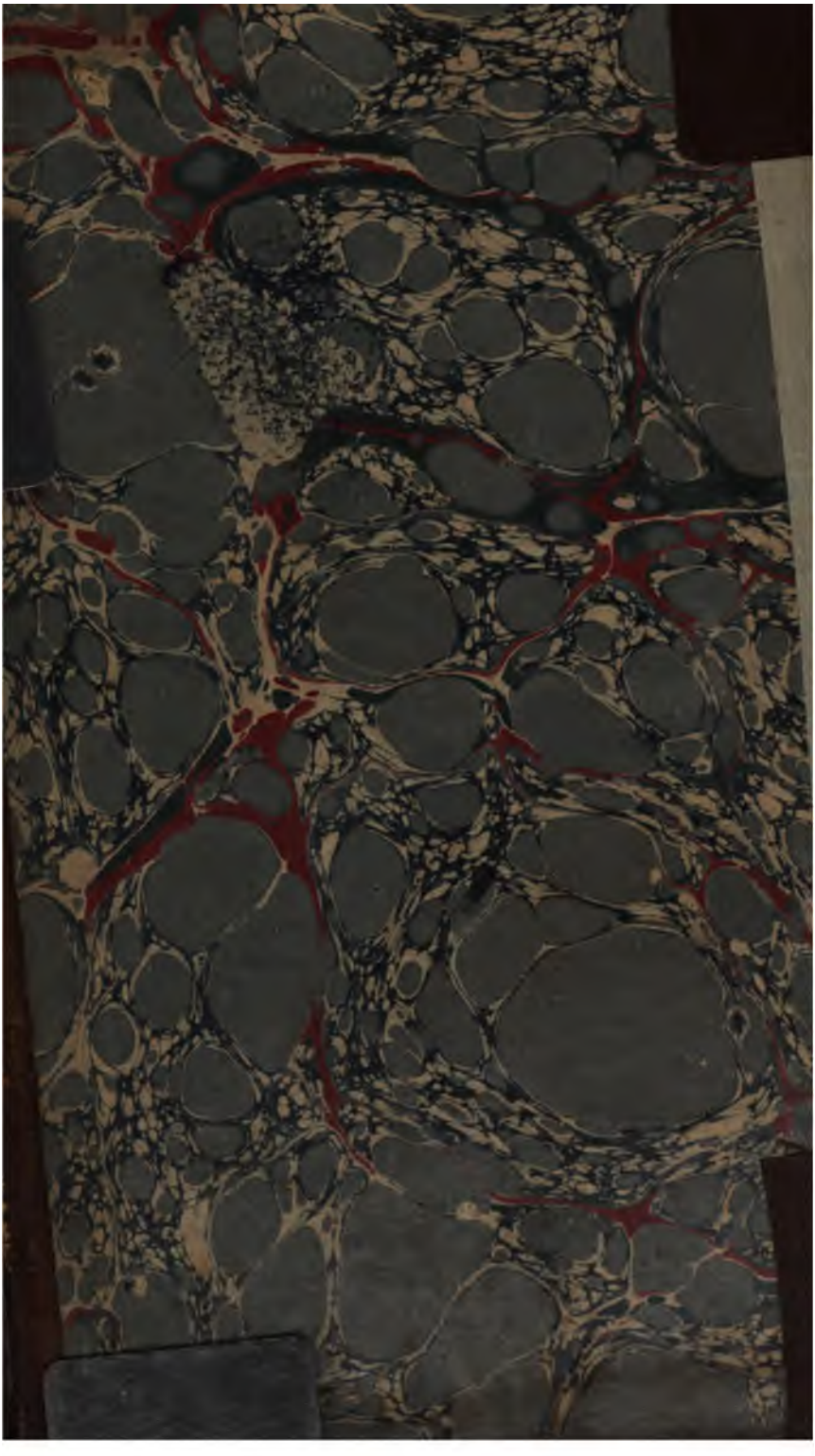

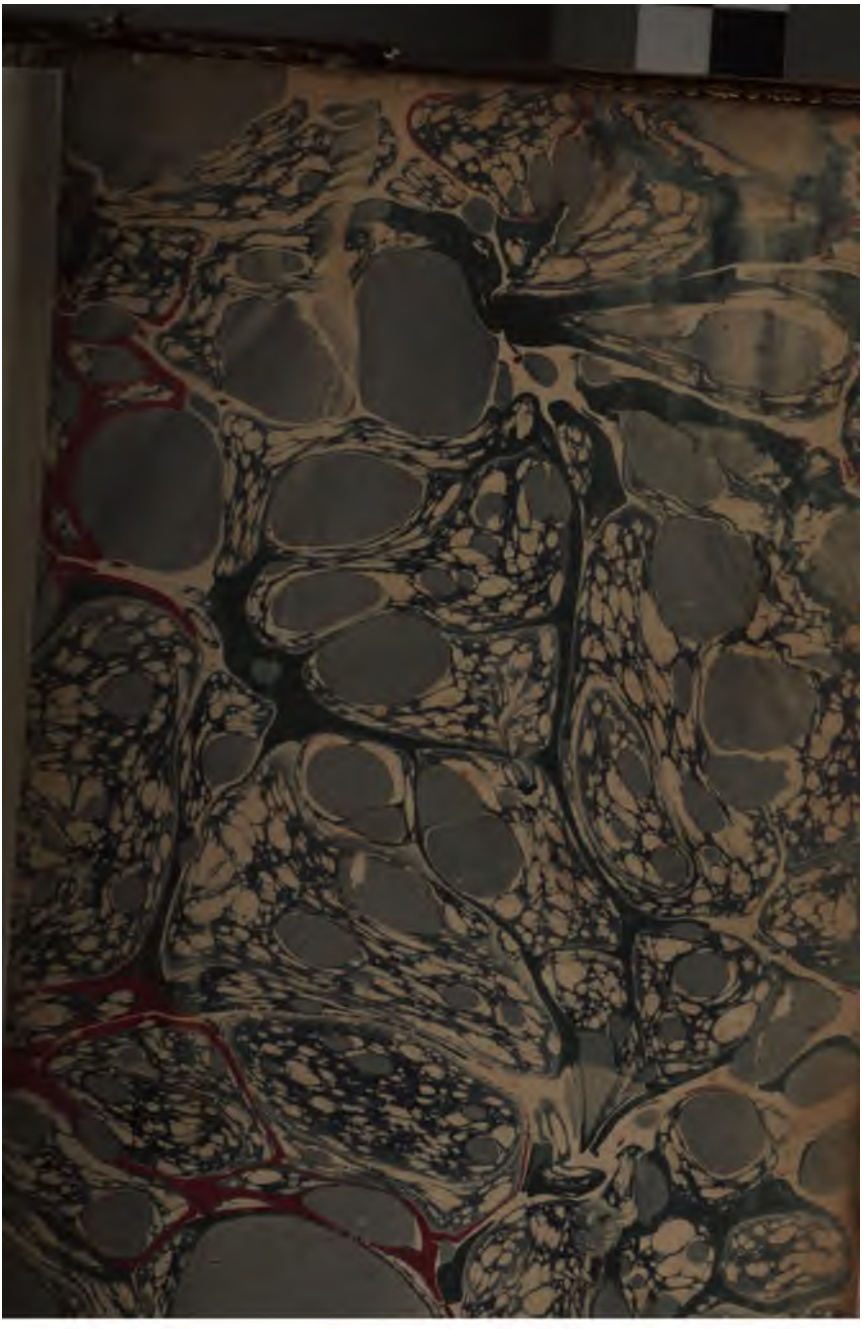

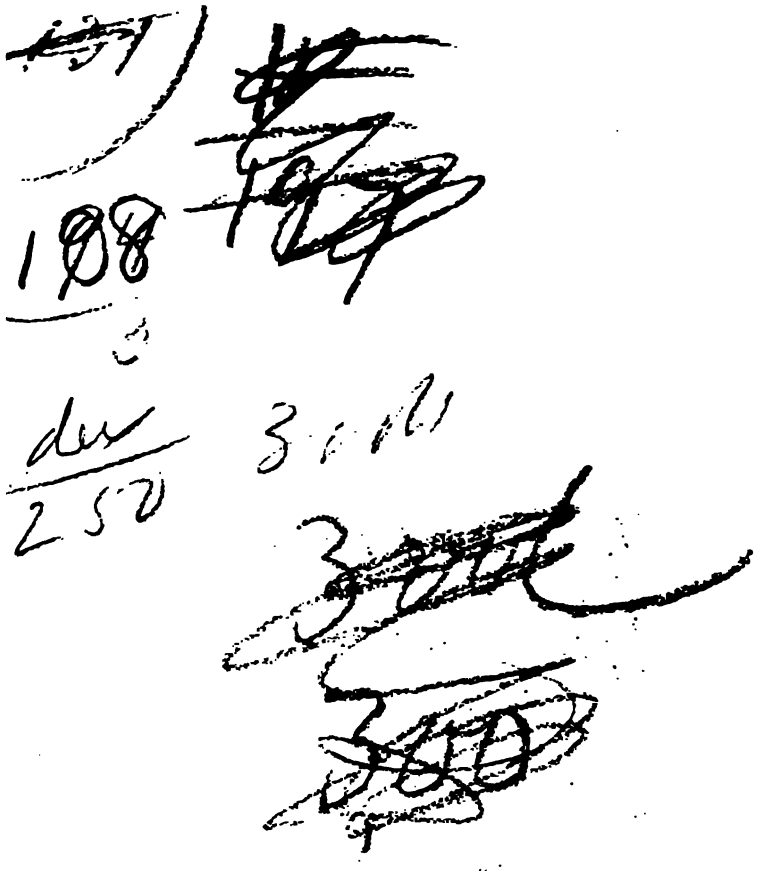

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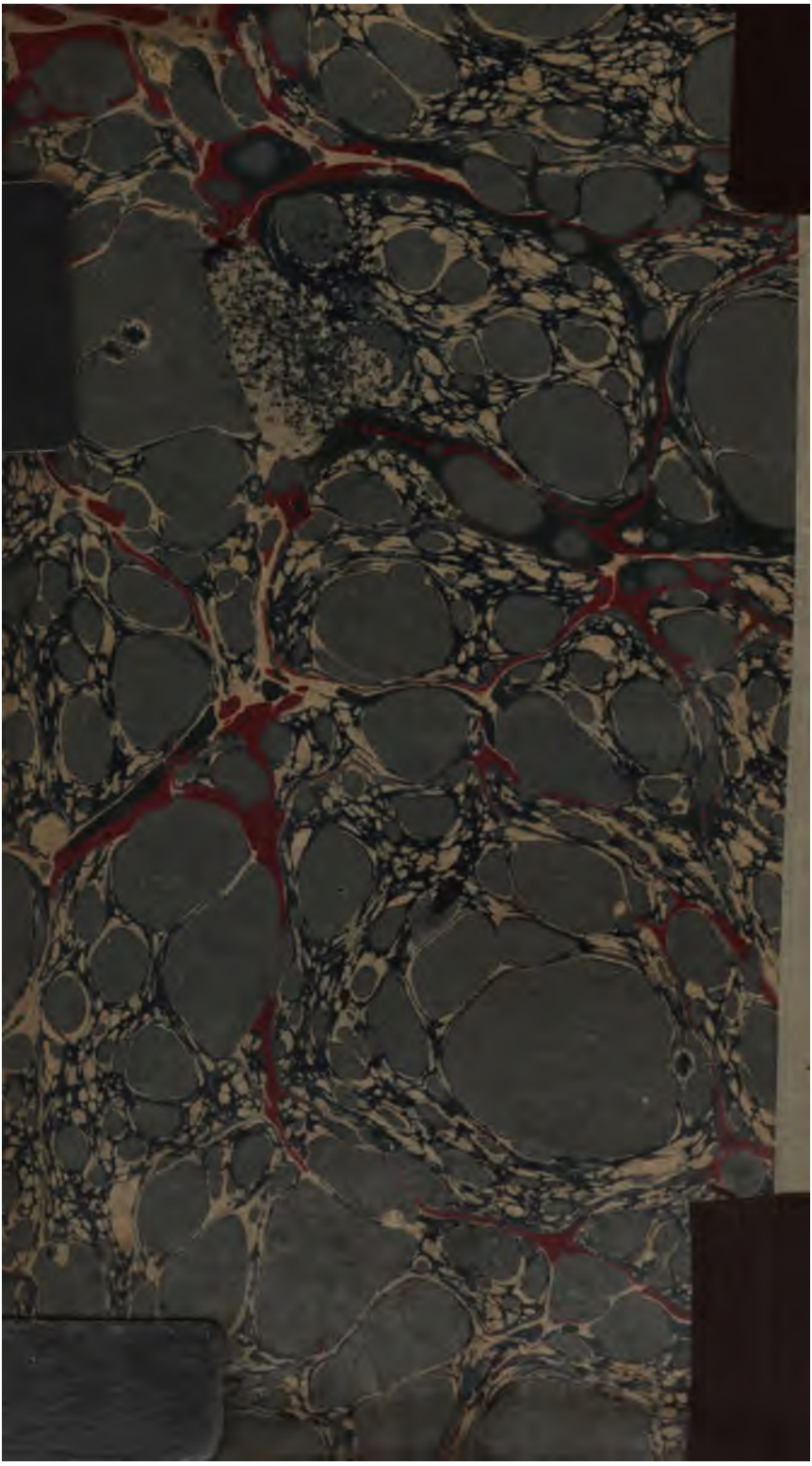

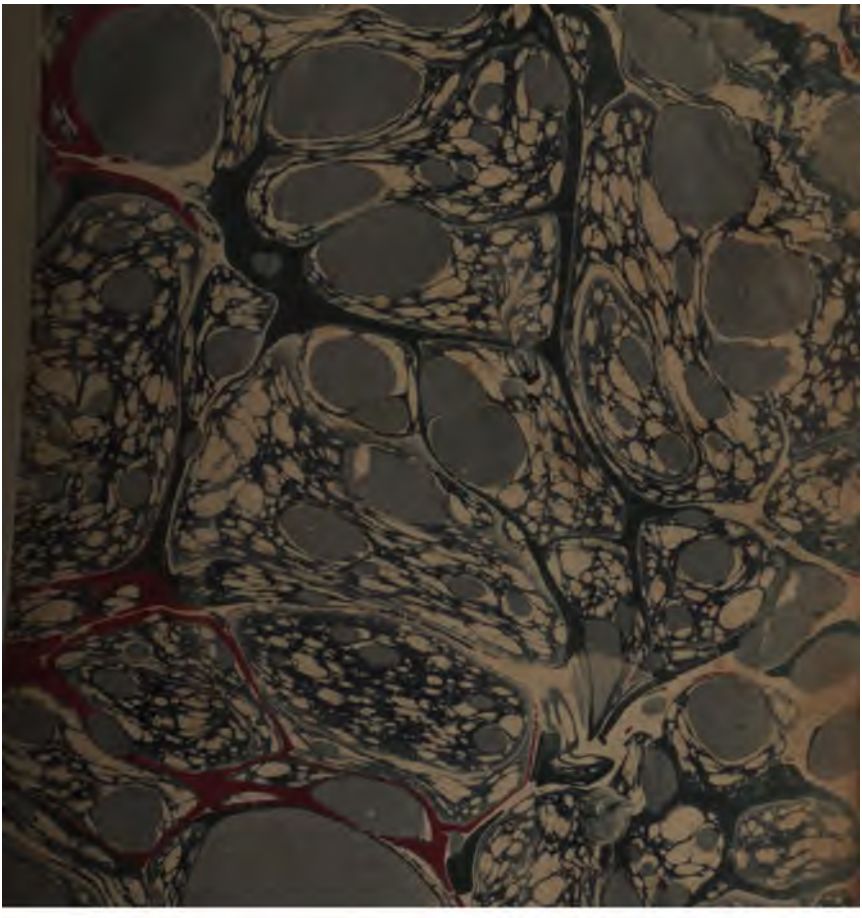

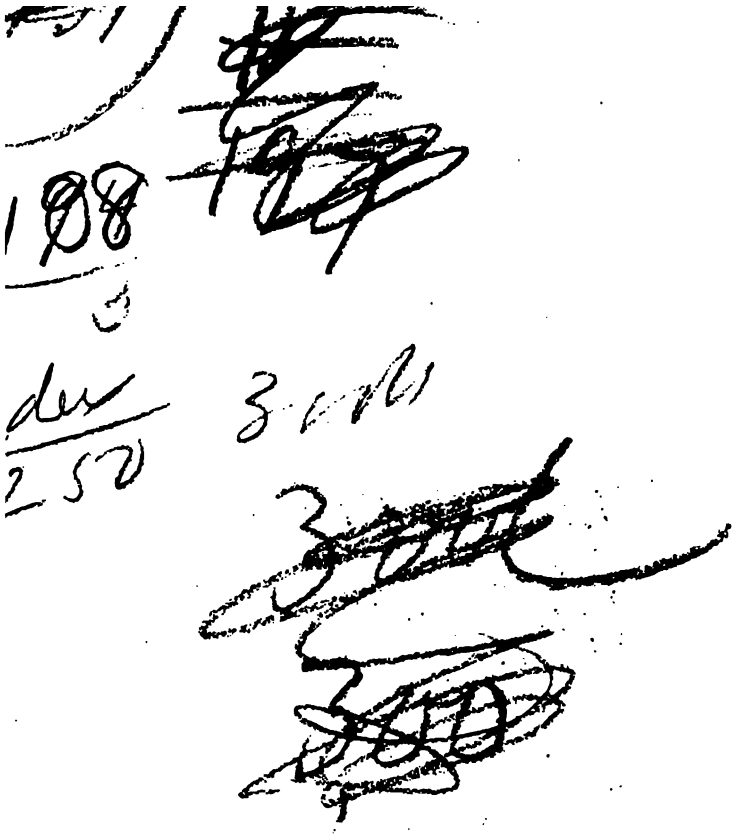

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THOMAS REID D.D.

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ESSAYS

ON THE

POWERS

OF THE HUMAN MIND.

BY

THOMAS REID, D. D. F. R. S. EDIN.
PROFESSOR OF MORAL PHILOSOPHY
IN THE UNIVERSITY OF GLASGOW.

TO WHICH IS PREFIXED

AN ACCOUNT OF THE LIFE AND WRITINGS
OF THE AUTHOR.

IN THREE VOLUMES.

VOL. I.

EDINBURGH:
PRINTED FOR
BELL & BRADFUTE.
SOLD BY G. AND J. ROBINSON, LONDON.

1803.

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ACCOUNT

OF THE

LIFE AND WRITINGS

OF

THOMAS REID, D.D. F.R.S. EDIN,

LATE PROFESSOR OF MORAL PHILOSOPHY

IN THE UNIVERSITY OF GLASGOW.

BY

DUGALD STEWART, F.R.S. EDIN.

READ AT DIFFERENT MEETINGS OF THE ROYAL SOCIETY

OF EDINBURGH.

ACCOUNT

OF THE

LIFE AND WRITINGS

OF

THOMAS REID, D.D.

SECTION FIRST.

From Dr Reid's Birth till the date of his latest Publication.

THE life of which I am now to present to the Royal Society a short account, although it fixes an æra in the history of modern philosophy, was uncommonly barren of those incidents which furnish materials for biography;—strenuously devoted to truth, to virtue, and to the best interests of mankind; but spent in the obscurity of a learned retirement, remote from the pursuits of ambition, and with little solicitude about literary fame. After the agitation, however, of the political convulsions which Europe has witnessed

for a courſe of years, the ſimple record of ſuch a life may derive an intereſt even from its uniformity; and when contraſted with the events of the paſſing ſcene, may lead the thoughts to ſome views of human nature, on which it is not ungrateful to repoſe.

THOMAS REID, D. D. late Profeſſor of Moral Philoſophy in the Univerſity of Glaſgow, was born on the 26th of April 1710, at Strachan in Kincardineſhire, a country pariſh ſituated about twenty miles from Aberdeen, on the north ſide of the Grampian Mountains.

His father, the Reverend LEWIS REID, was miniſter of this pariſh for fifty years.—He was a clergyman, according to his ſon's account of him, reſpected by all who knew him, for his piety, prudence, and benevolence; inheriting from his anceſtors, (moſt of whom, from the time of the Proteſtant eſtabliſhment, had been miniſters of the church of Scotland), that purity and ſimplicity of manners which became his ſtation; and a love of letters, which, without attracting the notice of the world, amuſed his leiſure, and dignified his retirement.

For

For ſome generations before his time, a propenſity to literature, and to the learned profeſſions,—a propenſity which, when it has once become characteriſtical of a race, is peculiarly apt to be propagated by the influence of early aſſociations and habits,—may be traced in ſeveral individuals among his kindred. One of his anceſtors, JAMES REID, was the firſt miniſter of Banchory-Ternan after the Reformation; and tranſmitted to four ſons a predilection for thoſe ſtudious habits which formed his own happineſs. He was himſelf a younger ſon of Mr REID of Pitfoddels, a gentleman of a very ancient and reſpectable family in the county of Aberdeen.

JAMES REID was ſucceeded as miniſter of Banchory by his ſon ROBERT.—Another ſon, THOMAS, roſe to conſiderable diſtinction both as a philoſopher and a poet; and ſeems to have wanted neither ability nor inclination to turn his attainments to the beſt advantage. After travelling over Europe, and maintaining, as was the cuſtom of his age, public diſputations in ſeveral univerſities, he collected into a volume the theſes and diſſertations which had been the ſubjects of his literary conteſts; and alſo pu-

bliſhed ſome Latin poems, which may be found in the collection entitled *Delitiæ Poëtarum Scotorum.* On his return to his native country, he fixed his reſidence in London, where he was appointed ſecretary in the Greek and Latin tongues to King JAMES the Firſt of England, and lived in habits of intimacy with ſome of the moſt diſtinguiſhed characters of that period.—Little more, I believe, is known of THOMAS REID's hiſtory, excepting that he bequeathed to the Mariſchal College of Aberdeen a curious collection of books and manuſcripts, with a fund for eſtabliſhing a ſalary to a librarian.

ALEXANDER REID, the third ſon, was phyſician to King CHARLES the Firſt, and publiſhed ſeveral books on ſurgery and medicine. The fortune he acquired in the courſe of his practice was conſiderable, and enabled him (beſide many legacies to his relations and friends) to leave various laſting and honourable memorials, both of his benevolence, and of his attachment to letters.

A fourth ſon, whoſe name was ADAM, tranſlated into Engliſh, BUCHANAN's Hiſtory of Scotland. Of this tranſlation, which was never publiſhed, there is a manuſcript copy in the poſſeſſion of the Univerſity of Glaſgow.

A grandſon of ROBERT, the eldeſt of theſe ſons, was the third miniſter of Banchory after the Reformation, and was great-grandfather of THOMAS REID, the ſubject of this memoir *.

The particulars hitherto mentioned, are ſtated on the authority of ſome ſhort memorandums written by Dr REID a few weeks before his death. In conſequence of a ſuggeſtion of his friend Dr GREGORY, he had reſolved to amuſe himſelf with collecting ſuch facts as his papers or memory could ſupply, with reſpect to his life, and the progreſs of his ſtudies; but, unfortunately, before he had fairly entered on the ſubject, his deſign was interrupted by his laſt illneſs. If he had lived to complete it, I might have entertained hopes of preſenting to the Public ſome details with reſpect to the hiſtory of his opinions and ſpeculations on thoſe important ſubjects to which he dedicated his talents;—the moſt intereſting of all articles in the biography of a philoſopher, and of which, it is to be lamented, that ſo few authentic records are to be found in the

* NOTE A.

annals of letters. All the information, however, which I have derived from theſe notes, is exhauſted in the foregoing pages; and I muſt content myſelf, in the continuation of my narrative, with thoſe indirect aids which tradition, and the recollection of a few old acquaintance, afford; added to what I myſelf have learned from Dr REID's converſation, or collected from a careful peruſal of his writings.

His mother, MARGARET GREGORY, was a daughter of DAVID GREGORY, Eſq; of Kinnairdie, in Banffſhire; elder brother of JAMES GREGORY, the inventor of the reflecting teleſcope, and the antagoniſt of HUYGHENS. She was one of twenty-nine children; the moſt remarkable of whom was DAVID GREGORY, Savilian Profeſſor of Aſtronomy at Oxford, and an intimate friend of Sir ISAAC NEWTON. Two of her younger brothers were at the ſame time Profeſſors of Mathematics; the one at St Andrew's, the other at Edinburgh; and were the firſt perſons who taught the NEWTONIAN philoſophy in our northern univerſities. The hereditary worth and genius which have ſo long diſtinguiſhed, and which ſtill diſtinguiſh, the deſcendants of this memorable

rable family, are well known to all who have turned their attention to Scottiſh biography; but it is not known ſo generally, that through the female line, the ſame characteriſtical endowments have been conſpicuous in various inſtances; and that to the other monuments which illuſtrate the race of the GREGORIES, is to be added *the Philoſophy of* REID.

With reſpect to the earlier part of Dr REID's life, all that I have been able to learn, amounts to this, That, after two years ſpent at the pariſh-ſchool of Kincardine, he was ſent to Aberdeen, where he had the advantage of proſecuting his claſſical ſtudies under an able and diligent teacher; that, about the age of twelve or thirteen, he was entered as a ſtudent in Mariſchal College; and that his maſter in philoſophy, for three years, was Dr GEORGE TURNBULL, who afterwards attracted ſome degree of notice as an author; particularly, by a book, entitled, Principles of Moral Philoſophy, and by a voluminous treatiſe (long ago forgotten) on Ancient Painting*. The ſeſſions of the College

* NOTE B.

were, at that time, very ſhort, and the education (according to Dr REID's own account) ſlight and ſuperficial.

It does not appear from the information which I have received, that he gave any early indications of future eminence. His induſtry, however, and modeſty, were conſpicuous from his childhood; and it was foretold of him, by the pariſh ſchoolmaſter, who initiated him in the firſt principles of learning, "That he would turn "out to be a man of good and well wearing "parts;" a prediction which touched, not unhappily, on that capacity of "patient thought" which ſo peculiarly characterized his philoſophical genius.

His reſidence at the Univerſity was prolonged beyond the uſual term, in conſequence of his appointment to the office of Librarian, which had been endowed by one of his anceſtors about a century before. The ſituation was acceptable to him, as it afforded an opportunity of indulging his paſſion for ſtudy, and united the charms of a learned ſociety, with the quiet of an academical retreat.

During

During this period, he formed an intimacy with JOHN STEWART, afterwards Profeſſor of Mathematics in Mariſchal College, and author of a Commentary on NEWTON's Quadrature of Curves. His predilection for mathematical purſuits, was confirmed and ſtrengthened by this connection. I have often heard him mention it with much pleaſure, while he recollected the ardour with which they both proſecuted theſe faſcinating ſtudies, and the lights which they imparted mutually to each other, in their firſt peruſal of the *Principia*, at a time when a knowledge of the NEWTONIAN diſcoveries was only to be acquired in the writings of their illuſtrious author.

In 1736, Dr REID reſigned his office of librarian, and accompanied Mr STEWART on an excurſion to England. They viſited together London, Oxford, and Cambridge, and were introduced to the acquaintance of many perſons of the firſt literary eminence. His relation to Dr DAVID GREGORY procured him a ready acceſs to MARTIN FOLKES, whoſe houſe concentrated the moſt intereſting objects which the metropolis had to offer to his curioſity. At

Cambridge

Cambridge he ſaw Dr BENTLEY, who delighted him with his learning, and amuſed him with his vanity; and enjoyed repeatedly the converſation of the blind mathematician, SAUNDERSON; a phenomenon in the hiſtory of the human mind, to which he has referred more than once, in his philoſophical ſpeculations.

With the learned and amiable man who was his companion in this journey, he maintained an uninterrupted friendſhip till 1766, when Mr STEWART died of a malignant fever. His death was accompanied with circumſtances deeply afflicting to Dr REID's ſenſibility; the ſame diſorder proving fatal to his wife and daughter, both of whom were buried with him in one grave.

In 1737, Dr REID was preſented, by the King's College of Aberdeen, to the living of New-Machar in the ſame county; but the circumſtances in which he entered on his preferment were far from auſpicious. The intemperate zeal of one of his predeceſſors, and an averſion to the law of patronage, had ſo inflamed the minds of his pariſhioners againſt him, that, in the firſt diſcharge of his clerical functions, he had not only to encounter the moſt violent oppoſition, but was expoſed

poſed to perſonal danger. His unwearied attention, however, to the duties of his office; the mildneſs and forbearance of his temper, and the active ſpirit of his humanity, ſoon overcame all theſe prejudices; and, not many years afterwards, when he was called to a different ſituation, the ſame perſons who had ſuffered themſelves to be ſo far miſled, as to take a ſhare in the outrages againſt him, followed him, on his departure, with their bleſſings and tears.

Dr REID's popularity at New-Machar, (as I am informed by the reſpectable clergyman * who now holds that living), increaſed greatly after his marriage, in 1740, with ELIZABETH, daughter of his uncle, Dr GEORGE REID, phyſician in London. The accommodating manners of this excellent woman, and her good offices among the ſick and neceſſitous, are ſtill remembered with gratitude; and ſo endeared the family to the neighbourhood, that its removal was regarded as a general misfortune. The ſimple and affecting language in which ſome old men expreſſed themſelves on this ſubject, in converſing with

* The Reverend WILLIAM STRONACH.

with the preſent miniſter, deſerves to be recorded. "We fought *againſt* Dr REID when he came, and would have fought *for* him when he went away."

In ſome notes relative to the earlier part of his hiſtory, which have been kindly communicated to me by the Reverend Mr DAVIDSON, miniſter of Rayne, it is mentioned as a proof of his uncommon modeſty and diffidence, that long after he became miniſter of New-Machar, he was accuſtomed, from a diſtruſt in his own powers, to preach the ſermons of Dr TILLOTSON and of Dr EVANS. I have heard alſo, through other channels, that he had neglected the practice of compoſition to a more than ordinary degree, in the earlier part of his ſtudies. The fact is curious, when contraſted with that eaſe, perſpicuity, and purity of ſtyle, which he afterwards attained. From ſome information, however, which has been lately tranſmitted to me by one of his neareſt relations, I have reaſon to believe, that the number of original diſcourſes which he wrote, while a country clergyman, was not inconſiderable.

The

The ſatisfaction of his own mind was probably, at this period, a more powerful incentive to his philoſophical reſearches, than the hope of being able to inſtruct the world as an author. But, whatever his views were, one thing is certain, that during his reſidence at New-Machar, the greater part of his time was ſpent in the moſt intenſe ſtudy; more particularly in a careful examination of the laws of external perception, and of the other principles which form the groundwork of human knowledge. His chief relaxations were gardening and botany, to both of which purſuits he retained his attachment even in old age.

A paper which he publiſhed in the Philoſophical Tranſactions of the Royal Society of London, for the year 1748, affords ſome light with reſpect to the progreſs of his ſpeculations about this period. It is entitled, *An Eſſay on Quantity, occaſioned by reading a Treatiſe, in which Simple and Compound Ratios are applied to Virtue and Merit;* and ſhews plainly, by its contents, that, although he had not yet entirely relinquiſhed the favourite reſearches of his youth,

he

he was beginning to direct his thoughts to other objects.

The treatiſe alluded to in the title of this paper, was manifeſtly the "Inquiry into the "Origin of our Ideas of *Beauty* and *Virtue*," by Dr HUTCHESON of Glaſgow. According to this very ingenious writer, the *moment* of public good produced by an individual, depending partly on his *benevolence*, and partly on his *ability*, the relation between theſe different moral ideas may be expreſſed in the technical form of algebraiſts, by ſaying, that the firſt is in the compound proportion of the two others. Hence, Dr HUTCHESON infers, that "*the benevolence* of "an agent, (which in this ſyſtem is ſynonymous "with his *moral merit*), is proportional to a "fraction, having the moment of good for the "numerator, and the ability of the agent for "the denominator." Various other examples of a ſimilar nature occur in the ſame work; and are ſtated with a gravity not altogether worthy of the author. It is probable, that they were intended merely as *illuſtrations* of his general reaſonings, not as *media* of inveſtigation for the diſcovery of new concluſions; but they appear-

ed

ed to Dr Reid to be an innovation which it was of importance to reſiſt, on account of the tendency it might have (by confounding the evidence of different branches of ſcience) to retard the progreſs of knowledge. The very high reputation which Dr Hutcheson then poſſeſſed in the Univerſities of Scotland, added to the recent attempts of Arbuthnot and Cheyne to apply mathematical reaſoning to medicine, would beſtow, it is likely, an intereſt on Dr Reid's Eſſay at the time of its publication, which it can ſcarcely be expected to poſſeſs at preſent. Many of the obſervations, however, which it contains, are acute and original; and all of them are expreſſed with that clearneſs and preciſion, ſo conſpicuous in his ſubſequent compoſitions. The circumſtance which renders a ſubject ſuſceptible of mathematical conſideration, is accurately ſtated; and the proper province of that ſcience defined in ſuch a manner, as ſufficiently to expoſe the abſurdity of thoſe abuſes of its technical phraſeology which were at that time prevalent. From ſome paſſages in it, there is, I think, ground for concluding, that the Author's reading had not been very extenſive previous to this

this period. The enumeration, in particular, which he has given of the different kinds of *proper quantity*, affords a proof, that he was not acquainted with the refined yet ſound diſquiſitions concerning the nature of *number* and of *proportion*, which had appeared almoſt a century before, in the *Mathematical Lectures* of Dr BARROW; nor with the remarks on the ſame ſubject introduced by Dr CLARKE in one of his controverſial letters addreſſed to LEIBNITZ.

In the ſame paper, Dr REID takes occaſion to offer ſome reflections on the diſpute between the *Newtonians* and *Leibnitzians* concerning the meaſure of forces. The fundamental idea on which theſe reflections proceed, is juſt and important; and it leads to the correction of an error, committed very generally by the partizans of both opinions; that, of miſtaking a queſtion concerning the comparative advantages of two *definitions*, for a difference of ſtatement with reſpect to a *phyſical fact*. It muſt, I think, be acknowledged, at the ſame time, that the whole merits of the controverſy are not here exhauſted; and that the honour of placing this very ſubtle and abſtruſe queſtion in a point of view calculated

calculated to reconcile completely the contending parties, was reſerved for M. D'ALEMBERT. To have fallen ſhort of the ſucceſs which attended the inquiries of that eminent man, on a ſubject ſo congenial to his favourite habits of ſtudy, will not reflect any diſcredit on the powers of Dr REID's mind, in the judgment of thoſe who are at all acquainted with the hiſtory of this celebrated diſcuſſion.

In 1752, the Profeſſors of *King's College* elected Dr REID Profeſſor of Philoſophy, in teſtimony of the high opinion they had formed of his learning and abilities. Of the particular plan which he followed in his academical lectures, while he held this office, I have not been able to obtain any ſatisfactory account; but the department of ſcience which was aſſigned to him by the general ſyſtem of education in that univerſity, was abundantly extenſive; comprehending Mathematics and Phyſics as well as Logic and Ethics. A ſimilar ſyſtem was purſued formerly in the other univerſities of Scotland; the ſame profeſſor then conducting his pupils through all thoſe branches of knowledge which are now appropriated to different teachers. And

where he happened fortunately to poſſeſs thoſe various accompliſhments which diſtinguiſhed Dr REID in ſo remarkable a degree, it cannot be doubted that the unity and comprehenſiveneſs of method, of which ſuch academical courſes admitted, muſt neceſſarily have poſſeſſed important advantages over that more minute ſubdiviſion of literary labour which has ſince been introduced. But as public eſtabliſhments ought to adapt themſelves to what is ordinary, rather than to what is poſſible, it is not ſurpriſing, that experience ſhould have gradually ſuggeſted an arrangement more ſuitable to the narrow limits which commonly circumſcribe human genius.

Soon after Dr REID's removal to Aberdeen, he projected (in conjunction with his friend Dr JOHN GREGORY) a literary ſociety, which ſubſiſted for many years, and which ſeems to have had the happieſt effects in awakening and directing that ſpirit of philoſophical reſearch, which has ſince reflected ſo much luſtre on the north of Scotland. The meetings of this ſociety were held weekly; and afforded the members, (beſide the advantages to be derived from a mutual communication

communication of their ſentiments on the common objects of their purſuit), an opportunity of ſubjecting their intended publications to the teſt of friendly criticiſm. The number of valuable works which iſſued nearly about the ſame time, from individuals connected with this inſtitution, more particularly the writings of REID, GREGORY, CAMPBELL, BEATTIE and GERARD, furniſh the beſt panegyric on the enlightened views of thoſe under whoſe direction it was originally formed.

Among theſe works, the moſt original and profound was unqueſtionably the *Inquiry into the Human Mind*, publiſhed by Dr REID in 1764. The plan appears to have been conceived, and the ſubject deeply meditated, by the Author long before; but it is doubtful, whether his modeſty would have ever permitted him to preſent to the world the fruits of his ſolitary ſtudies, without the encouragement which he received from the general acquieſcence of his aſſociates, in the moſt important concluſions to which he had been led.

From a paſſage in the dedication, it would ſeem, that the ſpeculations which terminated in

theſe concluſions had commenced as early as the year 1739; at which period the publication of Mr HUME's *Treatiſe of Human Nature* induced him, for the firſt time, (as he himſelf informs us), "to call in queſtion the principles commonly received with regard to the human underſtanding." In his *Eſſays on the Intellectual Powers*, he acknowledges, that, in his youth, he had, without examination, admitted the eſtabliſhed opinions on which Mr HUME's ſyſtem of ſcepticiſm was raiſed; and that it was the conſequences which theſe opinions ſeemed to involve, which rouſed his ſuſpicions concerning their truth. "If I may preſume" (ſays he) "to ſpeak my own ſentiments, I once believed *the doctrine of Ideas* ſo firmly, as to embrace the whole of BERKELEY's ſyſtem along with it; till finding other conſequences to follow from it, which gave me more uneaſineſs than the want of a material world, it came into my mind more than forty years ago, to put the queſtion, What evidence have I for this doctrine, that all the objects of my knowledge are ideas in my own mind? From that time to the preſent, I have been candidly and impartially,

" impartially, as I think, ſeeking for the evi-
" dence of this principle; but can find none, ex-
" cepting the authority of philoſophers."

In following the train of Dr REID's reſearches, this laſt extract merits attention, as it contains an explicit avowal, on his own part, that, at one period of his life, he had been led, by BERKELEY's reaſonings, to abandon the belief of the exiſtence of *matter*. The avowal does honour to his candour, and the fact reflects no diſcredit on his ſagacity. The truth is, that this article of the Berkleian ſyſtem, however contrary to the concluſions of a ſounder philoſophy, was the error of no common mind. Conſidered in contraſt with that theory of materialiſm, which the excellent Author was anxious to ſupplant, it poſſeſſed important advantages, not only in its tendency, but in its ſcientific conſiſtency; and it afforded a proof, wherever it met with a favourable reception, of an underſtanding ſuperior to thoſe caſual aſſociations, which, in the apprehenſions of moſt men, blend indiſſolubly the phenomena of thought with the objects of external perception. It is recorded as a ſaying of M. TURGOT, (whoſe philoſophical opinions in

ſome important points approached very nearly to thoſe of Dr REID*), That "he who had "never doubted of the exiſtence of matter, "might be aſſured he had no turn for meta-"phyſical diſquiſitions."

As the refutation of Mr HUME's ſceptical theory was the great and profeſſed object of Dr REID's *Inquiry*, he was anxious, before taking the field as a controverſial writer, to guard againſt the danger of miſapprehending or miſrepreſenting the meaning of his adverſary, by ſubmitting his reaſonings to Mr HUME's private examination. With this view, he availed himſelf of the good offices of Dr BLAIR, with whom both he and Mr HUME had long lived in habits of friendſhip. The communications which he at firſt tranſmitted, conſiſted only of detached parts of the work; and appear evidently, from a correſpondence which I have peruſed, to have conveyed a very imperfect idea of his general ſyſtem. In one of Mr HUME's letters

* See, in particular, the article *Exiſtence* in the *Encyclopedie*.

letters to Dr BLAIR, he betrays ſome want of his uſual good humour, in looking forward to his new antagoniſt. "I wiſh," ſays he, "that "the Parſons would confine themſelves to their "old occupation of worrying one another, and "leave Philoſophers to argue with temper, mo- "deration, and good manners." After Mr HUME, however, had read the manuſcript, he addreſſed himſelf directly to the Author, in terms ſo candid and liberal, that it would be unjuſt to his memory to withhold from the puplic ſo pleaſing a memorial of his character.

"By Dr BLAIR's means, I have been favoured "with the peruſal of your performance, which I "have read with great pleaſure and attention. "It is certainly very rare, that a piece ſo deeply "philoſophical is wrote with ſo much ſpirit, and "affords ſo much entertainment to the reader; "though I muſt ſtill regret the diſadvantages un- "der which I read it, as I never had the whole "performance at once before me, and could not "be able fully to compare one part with another. "To this reaſon, chiefly, I aſcribe ſome obſcuri- "ties, which, in ſpite of your ſhort analyſis or ab- "ſtract, ſtill ſeem to hang over your ſyſtem. For I

" muſt do you the juſtice to own, that when I en-
" ter into your ideas, no man appears to expreſs
" himſelf with greater perſpicuity than you do;
" a talent which, above all others, is requiſite in
" that ſpecies of literature which you have culti-
" vated. There are ſome objections which I
" would willingly propoſe to the chapter, *Of*
" *Sight*, did I not ſuſpect that they proceed from
" my not ſufficiently underſtanding it; and I am
" the more confirmed in this ſuſpicion, as Dr
" BLAIR tells me, that the former objections I
" made had been derived chiefly from that cauſe.
" I ſhall therefore forbear till the whole can be
" before me, and ſhall not at preſent propoſe any
" farther difficulties to your reaſonings. I ſhall
" only ſay, that if you have been able to clear up
" theſe abſtruſe and important ſubjects, inſtead of
" being mortified, I ſhall be ſo vain as to pretend
" to a ſhare of the praiſe; and ſhall think, that
" my errors, by having at leaſt ſome coherence,
" had led you to make a more ſtrict review of
" my principles, which were the common ones,
" and to perceive their futility.

" As I was deſirous to be of ſome uſe to you, I
" kept a watchful eye all along over your ſtyle;

" but

" but it is really ſo correct, and ſo good Engliſh,
" that I found not any thing worth the remark-
" ing. There is only one paſſage in this chapter,
" where you make uſe of the phraſe *binder to do*,
" inſtead of *binder from doing*, which is the Eng-
" liſh one; but I could not find the paſſage when
" I ſought for it. You may judge how unexcep-
" tionable the whole appeared to me, when I
" could remark ſo ſmall a blemiſh. I beg my
" compliments to my friendly adverſaries, Dr
" CAMPBELL and Dr GERARD; and alſo to Dr
" GREGORY, whom I ſuſpect to be of the ſame
" diſpoſition, though he has not openly declared
" himſelf ſuch."———

Of the particular doctrines contained in Dr REID's *Inquiry*, I do not think it neceſſary here to attempt any abſtract; nor indeed do his ſpeculations (conducted as they were in ſtrict conformity to the rules of inductive philoſophizing) afford a ſubject for the ſame ſpecies of rapid outline, which is ſo uſeful in facilitating the ſtudy of a merely hypothetical theory. Their great object was to record and to claſſify the phenomena which the operations of the human mind preſent to thoſe who reflect carefully on the ſubjects of their conſciouſneſs; and of ſuch a hiſto-

ry,

... abridgment could be
... Some reflections on the
... the Author, and on the
... researches in this depart-
... afterwards find a more con-
... I ſhall have finiſhed my ac-
... ent publications.'

... ecuting the ſtudy of the hu-
... a plan analogous to that which
... ceſsfully adopted in phyſics by
... Lord BACON, if not firſt concei-
... was at leaſt firſt carried ſuc-
... execution in his writings. An
... long before been announced by Mr
... the title-page of his *Treatiſe of Hu-*
..., to introduce the experimental me-
... reaſoning into moral ſubjects; and ſome
... able remarks are made in the introduction
... work, on the errors into which his pre-
... ceſſors had been betrayed by the ſpirit of hy-
... theſis; and yet it is now very generally ad-
mitted, that the whole of his own ſyſtem reſts on
a principle for which there is no evidence but
the authority of philoſophers; and it is certain,
that in no part of it has he aimed to inveſtigate
by

by a ſyſtematical analyſis, thoſe general principles of our conſtitution which can alone afford a ſynthetical explanation of its complicated phenomena.

I have often been diſpoſed to think, that Mr HUME's inattention to thoſe rules of philoſophizing which it was his profeſſed intention to exemplify, was owing in part to ſome indiſtinctneſs in his notions concerning their import. It does not appear, that, in the earlier part of his ſtudies, he had paid much attention to the models of inveſtigation exhibited in the writings of NEWTON and of his ſucceſſors: and that he was by no means aware of the extraordinary merits of BACON as a philoſopher, nor of the influence which his writings have had on the ſubſequent progreſs of phyſical diſcovery, is demonſtrated by the cold and qualified encomium which is beſtowed on his genius, in one of the moſt elaborate paſſages of the *Hiſtory of England.*

In theſe reſpects, Dr REID poſſeſſed important advantages; familiarized, from his early years, to thoſe experimental inquiries, which, in the

centuries, have exalt-
to the dignity of a
ſtrongly, by the pecu-
to connect every ſtep in
very with the hiſtory of the
influence of the general
the *Novum Organon*, may be
every page of his writings;
circumſtance by which theſe
and characteriſtically diſtin-
that they exhibit the firſt ſyſte-
attempt to exemplify, in the ſtudy
nature, the ſame plan of inveſtiga-
conducted NEWTON to the proper-
light, and to the law of gravitation. It is
a ſteady adherence to this plan, and not
the ſuperiority of his inventive powers,
he claims to himſelf any merit as a philoſo-
pher; and he ſeems even willing (with a modeſty
approaching to a fault) to abandon the praiſe of
what is commonly called *genius*, to the authors of
the ſyſtems which he was anxious to refute. "It
"is genius," he obſerves in one paſſage, "and
"not the want of it, that adulterates philoſo-
"phy, and fills it with error and falſe theory. A

"creative

" creative imagination diſdains the mean offices " of digging for a foundation, of removing rub- " biſh, and carrying materials: leaving theſe " ſervile employments to the drudges in ſcience, " it plans a deſign, and raiſes a fabric. Inven- " tion ſupplies materials where they are want- " ing, and fancy adds colouring, and every be- " fitting ornament. The work pleaſes the eye, " and wants nothing but ſolidity and a good " foundation. It ſeems even to vie with the " works of nature, till ſome ſucceeding archi- " tect blows it into ruins, and builds as goodly " a fabric of his own in its place."

" Succeſs in an inquiry of this kind," he obſerves farther, " it is not in human power to com- " mand; but perhaps it is poſſible, by caution " and humility, to avoid error and deluſion. " The labyrinth may be too intricate, and the " thread too fine, to be traced through all its " windings; but, if we ſtop where we can trace " it no farther, and ſecure the ground we have " gained, there is no harm done; a quicker " eye may in time trace it farther."

The unaſſuming language with which Dr Reid endeavours to remove the prejudices naturally

rally excited by a new attempt to philoſophize on ſo unpromiſing, and hitherto ſo ungrateful a ſubject, recalls to our recollection thoſe paſſages in which Lord BACON—filled as his own imagination was with the future grandeur of the fabric founded by his hand—beſpeaks the indulgence of his readers, for an enterpriſe apparently ſo hopeleſs and preſumptuous. The apology he offers for himſelf, when compared with the height to which the ſtructure of phyſical knowledge has ſince attained, may perhaps have ſome effect in attracting a more general attention to purſuits ſtill more immediately intereſting to mankind; and, at any rate, it forms the beſt comment on the prophetic ſuggeſtions in which Dr REID occaſionally indulges himſelf concerning the future progreſs of moral ſpeculation.

" Si homines per tanta annorum ſpatia viam
" veram inveniendi et colendi ſcientias tenuiſ-
" ſent, nec tamen ulterius progredi potuiſſent,
" audax procul dubio et temeraria foret opinio,
" poſſe rem in ulterius provehi. Quod ſi in *via*
" ipſa erratum ſit, atque hominum opera in iis
" conſumpta in quibus minime oportebat, ſequi-
" tur ex eo, non in rebus ipſis difficultatem oriri,

" quæ

" quæ poteſtatis noſtræ non ſunt; ſed in intel-
" lectu humano, ejusque uſu et applicatione,
" quæ res remedium et medicinam ſuſci-
" pit *."——" De nobis ipſis ſilemus: de re
" autem quæ agitur, petimus; Ut homines eam
" non opinionem, ſed opus eſſe cogitent; ac
" pro certo habeant, non ſectæ nos alicujus, aut
" placiti, ſed utilitatis et amplitudinis humanæ
" fundamenta moliri. Præterea, ut bene ſpe-
" rent; neque Inſtaurationem noſtram ut quid-
" dam infinitum et ultra mortale fingant, et
" animo concipiant; quum revera ſit infiniti
" erroris finis et terminus legitimus †."

The impreſſion produced on the minds of ſpeculative men, by the publication of Dr Reid's *Inquiry*, was fully as great as could be expected from the nature of his undertaking. It was a work neither addreſſed to the multitude, nor level to their comprehenſion; and the freedom with which it canvaſſed opinions ſanctioned by the higheſt authorities, was ill calculated to conciliate the favour of the learned. A few, however, habituated, like the author, to the analytical reſearches

* Nov. Org. 94.

† Inſtaur. Mag.—Præfat.

ſearches of the Newtonian ſchool, ſoon perceived the extent of his views, and recogniſed in his pages the genuine ſpirit and language of inductive inveſtigation. Among the members of this univerſity, Mr Ferguson was the firſt to applaud Dr Reid's ſucceſs; warmly recommending to his pupils a ſteady proſecution of the ſame plan, as the only effectual method of aſcertaining the general principles of the human frame; and illuſtrating happily, by his own profound and eloquent diſquiſitions, the application of ſuch ſtudies, to the conduct of the underſtanding, and to the great concerns of life. I recollect, too, when I attended (about the year 1771) the Lectures of the late Mr Russell, to have heard high encomiums on the Philoſophy of Reid, in the courſe of thoſe comprehenſive diſcuſſions concerning the objects and the rules of experimental ſcience, with which he ſo agreeably diverſified the particular doctrines of phyſics.—Nor muſt I omit this opportunity of paying a tribute to the memory of my old friend, Mr Stevenson, then Profeſſor of Logic; whoſe candid mind, at the age of ſeventy, gave a welcome reception to a ſyſtem ſubverſive of the theories

theories which he had taught for forty years; and whoſe zeal for the advancement of knowledge prompted him, when his career was almoſt finiſhed, to undertake the laborious taſk of new-modelling that uſeful compilation of elementary inſtruction, to which a ſingular diffidence of his own powers limited his literary exertions.

It is with no common feelings of reſpect and of gratitude, that I now recal the names of thoſe to whom I owe my firſt attachment to theſe ſtudies, and the happineſs of a liberal occupation ſuperior to the more aſpiring aims of a ſervile ambition.

From the Univerſity of Glaſgow, Dr Reid's *Inquiry* received a ſtill more ſubſtantial teſtimony of approbation; the author having been invited, in 1763, by that learned body, to the profeſſorſhip of Moral Philoſophy, then vacant by the reſignation of Mr Smith. The preferment was in many reſpects advantageous; affording an income conſiderably greater than he enjoyed at Aberdeen; and enabling him to concentrate to his favourite objects, that attention which had been hitherto diſtracted by the miſ-

cellaneous nature of his academical engagements. It was not, however, without reluctance, that he conſented to tear himſelf from a ſpot where he had ſo long been faſtening his roots; and, much as he loved the ſociety in which he paſſed the remainder of his days, I am doubtful if, in his mind, it compenſated the ſacrifice of earlier habits and connections.

Abſtracting from the charm of local attachment, the Univerſity of Glaſgow, at the time when Dr Reid was adopted as one of its members, preſented ſtrong attractions to reconcile him to his change of ſituation. Robert Simson, the great reſtorer of ancient geometry, was ſtill alive; and, although far advanced in years, preſerved unimpaired his ardour in ſtudy, his reliſh for ſocial relaxation, and his amuſing ſingularities of humour. Dr Moor combined with a gaiety and a levity foreign to this climate, the profound attainments of a ſcholar and of a mathematician. In Dr Black, to whoſe fortunate genius a new world of ſcience had juſt opened, Reid acknowledged an inſtructor and a guide; and met a ſimplicity of manners congenial to his own. The Wilsons (both father and ſon) were formed

formed to attach his heart by the ſimilarity of their ſcientific purſuits, and an entire ſympathy with his views and ſentiments. Nor was he leſs delighted with the good-humoured oppoſition which his opinions never failed to encounter in the acuteneſs of MILLAR,—then in the vigour of youthful genius, and warm from the leſſons of a different ſchool. Dr LEECHMAN, the friend and biographer of HUTCHESON, was the official head of the College; and added the weight of a venerable name to the reputation of a community, which he had once adorned in a more active ſtation *.

Animated by the zeal of ſuch aſſociates, and by the buſy ſcenes which his new reſidence preſented in every department of uſeful induſtry, Dr REID entered on his functions at Glaſgow, with an ardour not common at the period of life, which he had now attained. His reſearches concerning the human mind, and the principles of morals, which had occupied but an inconſiderable ſpace in the wide circle of ſcience, allotted to him by his former office, were extended and methodiſed in a courſe, which em-

 ployed

* NOTE C.

ployed five hours every week, during ſix months of the year: the example of his illuſtrious predeceſſor, and the prevailing topics of converſation around him, occaſionally turned his thoughts to commercial politics, and produced ſome ingenious eſſays on different queſtions connected with trade, which were communicated to a private ſociety of his academical friends: his early paſſion for the mathematical ſciences was revived by the converſation of SIMSON, MOOR, and the WILSONS; and, at the age of fifty-five, he attended the lectures of BLACK, with a juvenile curioſity and enthuſiaſm.

As the ſubſtance of Dr. REID's lectures at Glaſgow (at leaſt of that part of them which was moſt important and original) has been ſince given to the public in a more improved form, it is unneceſſary for me to enlarge on the plan which he followed in the diſcharge of his official duties. I ſhall therefore only obſerve, that beſide his Speculations on the Intellectual and Active Powers of Man, and a Syſtem of Practical Ethics, his courſe comprehended ſome general views with reſpect to Natural Juriſprudence, and the fundamental principles of Politics. A

few

few lectures on Rhetoric, which were read, at a ſeparate hour, to a more advanced claſs of ſtudents, formed a voluntary addition to the appropriate functions of his office, to which, it is probable, he was prompted, rather by a wiſh to ſupply what was then a deficiency in the eſtabliſhed courſe of education, than by any predilection for a branch of ſtudy ſo foreign to his ordinary purſuits.

The merits of Dr REID, as a public teacher, were derived chiefly from that rich fund of original and inſtructive philoſophy which is to be found in his writings; and from his unwearied aſſiduity in inculcating principles which he conceived to be of eſſential importance to human happineſs. In his elocution and mode of inſtruction, there was nothing peculiarly attractive. He ſeldom, if ever, indulged himſelf in the warmth of extempore diſcourſe; nor was his manner of reading calculated to increaſe the effect of what he had committed to writing. Such, however, was the ſimplicity and perſpicuity of his ſtyle; ſuch the gravity and authority of his character; and ſuch the general intereſt of his young hearers in the doctrines which he taught,

the numerous audiences to which his lectures were addreſſed, he was heard uniformly with the moſt ſilent and reſpectful attention. On this ſubject, I ſpeak from perſonal knowledge; having had the good fortune, during a conſiderable part of winter 1772, to be one of his pupils.

It does not appear to me, from what I am now able to recollect of the order which he obſerved in treating the different parts of his ſubject, that he had laid much ſtreſs on ſyſtematical arrangement. It is probable, that he availed himſelf of whatever materials his private inquiries afforded, for his academical compoſitions; without aiming at the merit of combining them into *a whole*, by a comprehenſive and regular deſign;—an undertaking, to which, if I am not miſtaken, the eſtabliſhed forms of his univerſity, conſecrated by long cuſtom, would have preſented ſome obſtacles. One thing is certain, that neither he nor his immediate predeceſſor ever publiſhed any general *proſpectus* of their reſpective plans; nor any *heads* or *outlines* to aſſiſt their ſtudents in tracing

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the trains of thought which ſuggeſted their various tranſitions.

The intereſt, however, excited by ſuch details as theſe, even if it were in my power to render them more full and ſatisfactory, muſt neceſſarily be temporary and local; and I therefore haſten to obſervations of a more general nature, on the diſtinguiſhing characteriſtics of Dr REID's philoſophical genius, and on the ſpirit and ſcope of thoſe reſearches which he has bequeathed to poſterity, concerning the phenomena and laws of the human mind. In mentioning his firſt performance on this ſubject, I have already anticipated a few remarks which are equally applicable to his ſubſequent publications; but the hints then ſuggeſted were too ſlight, to place in ſo ſtrong a light as I could wiſh, the peculiarities of that mode of inveſtigation, which it was the great object of his writings to recommend and to exemplify. His own anxiety, to neglect nothing that might contribute to its farther illuſtration, induced him, while his health and faculties were yet entire, to withdraw from his public labours; and to devote himſelf, with an undivided attention, to

a talk of more extenſive and permanent utility. It was in the year 1781 that he carried this deſign into execution, at a period of life (for he was then upwards of ſeventy) when the infirmities of age might be ſuppoſed to account ſufficiently for his retreat; but when, in fact, neither the vigour of his mind nor of his body ſeemed to have ſuffered any injury from time. The works which he publiſhed not many years afterwards, afford a ſufficient proof of the aſſiduity with which he had availed himſelf of his literary leiſure; his *Eſſays on the Intellectual Powers of Man* appearing in 1785; and thoſe on the *Active Powers* in 1788.

As theſe two performances are, both of them, parts of one great work, to which his *Inquiry into the Human Mind* may be regarded as the Introduction, I have reſerved for this place whatever critical reflections I have to offer on his merits as an Author; conceiving that they would be more likely to produce their intended effect, when preſented at once in a connected form, than if interſperſed, according to a chronological order, with the details of a biographical narrative.

SEC-

SECTION SECOND.

Obſervations on the Spirit and Scope of Dr REID's *Philoſophy.*

I HAVE already obſerved, that the diſtinguiſhing feature of Dr REID's Philoſophy, is the ſyſtematical ſteadineſs, with which he has adhered in his inquiries, to that plan of inveſtigation which is delineated in the *Novum Organon*, and which has been ſo happily exemplified in phyſics by Sir ISAAC NEWTON and his followers. To recommend this plan as the only effectual method of enlarging our knowledge of nature, was the favourite aim of all his ſtudies, and a topic on which he thought he could not enlarge too much, in converſing or correſponding with his younger friends. In a letter to Dr GREGORY, which I have peruſed, he particularly congratulates him, upon his acquaintance with Lord BACON's works; adding, "I am very apt to mea-

"ſure

" ſure a man's underſtanding, by the opinion he " entertains of that author."

It were perhaps to be wiſhed, that he had taken a little more pains to illuſtrate the fundamental rules of that logic, the value of which he eſtimated ſo highly; more eſpecially, to point out the modifications with which it is applicable to the ſcience of mind. Many important hints, indeed, connected with this ſubject, may be collected from different parts of his writings; but I am inclined to think, that a more ample diſcuſſion of it in a preliminary diſſertation, might have thrown light on the ſcope of many of his reſearches, and obviated ſome of the moſt plauſible objections which have been ſtated to his concluſions.

It is not, however, my intention at preſent, to attempt to ſupply a *deſideratum* of ſo great a magnitude;—an undertaking which, I truſt, will find a more convenient place, in the farther proſecution of thoſe ſpeculations with reſpect to the Intellectual Powers which I have already ſubmitted to the public. The detached remarks which follow, are offered merely as a ſupplement to what I have ſtated concerning the nature

ture and object of this branch of ſtudy, in the Introduction to the *Philoſophy of the Human Mind.*

The influence of BACON's genius on the ſubſequent progreſs of phyſical diſcovery, has been ſeldom fairly appreciated; by ſome writers almoſt entirely overlooked; and by others conſidered as the ſole cauſe of the reformation in ſcience which has ſince taken place. Of theſe two extremes, the latter certainly is the leaſt wide of the truth; for, in the whole hiſtory of letters, no other individual can be mentioned, whoſe exertions have had ſo indiſputable an effect in forwarding the intellectual progreſs of mankind. On the other hand, it muſt be acknowledged, that before the æra when BACON appeared, various philoſophers in different parts of Europe had ſtruck into the right path; and it may perhaps be doubted, whether any one important rule with reſpect to the true method of inveſtigation be contained in his works, of which no hint can be traced in thoſe of his predeceſſors. His great merit lay in concentrating their feeble and ſcattered lights; — fixing the attention of philoſophers on the diſtinguiſhing characteriſtics

teriſtics of true and of falſe ſcience, by a felicity of illuſtration peculiar to himſelf, ſeconded by the commanding powers of a bold and figurative eloquence. The method of inveſtigation which he recommended had been previouſly followed in every inſtance, in which any ſolid diſcovery had been made with reſpect to the laws of nature; but it had been followed accidentally, and without any regular, preconceived deſign; and it was reſerved for him to reduce to rule and method what others had effected, either fortuitouſly, or from ſome momentary glimpſe of the truth. It is juſtly obſerved by Dr Reid, that "the man who firſt diſcovered that cold "freezes water, and that heat turns it into va-"pour, proceeded on the ſame general prin-"ciple by which Newton diſcovered the law "of gravitation and the properties of light. "His *Regulæ Philoſophandi* are maxims of com-"mon ſenſe, and are practiſed every day in com-"mon life; and he who philoſophizes by other "rules, either concerning the material ſyſtem "or concerning the mind, miſtakes his aim."

Theſe remarks are not intended to detract from the juſt glory of Bacon; for they apply to all

all thoſe, without exception, who have ſyſtematized the principles of any of the arts. Indeed, they apply leſs forcibly to Him, than to any other philoſopher whoſe ſtudies have been directed to objects analogous to his; inaſmuch as we know of no art, of which the rules have been reduced ſucceſsfully into a didactic form, when the art itſelf was as much in infancy, as experimental philoſophy was when BACON wrote. —Nor muſt it be ſuppoſed, that the utility was ſmall of thus attempting to ſyſtematize the accidental proceſſes of unenlightened ingenuity, and to give to the nobleſt exertions of Human Reaſon, the ſame advantages of Scientific Method, which have contributed ſo much to enſure the ſucceſs of genius in purſuits of inferior importance. The very philoſophical motto which REYNOLDS has ſo happily prefixed to his *Academical Diſcourſes*, admits, on this occaſion, of a ſtill more appropriate application: "Omnia fere quæ præceptis continentur ab inge-
"niosis hominibus fiunt; ſed caſu quodam ma-
"gis quam ſcientia. Ideoque doctrina et ani-
"madverſio adhibenda eſt, ut ea quæ interdum

"ſine

" ſine ratione nobis occurrunt, ſemper in noſtra
" poteſtate ſint; et quoties res poſtulaverit, a
" nobis ex præparato adhibeantur."

But although a few ſuperior minds ſeem to have been in ſome meaſure prediſpoſed for that revolution in ſcience, which BACON contributed ſo powerfully to accompliſh, the caſe was very different with the great majority of thoſe who were then moſt diſtinguiſhed for learning and talents. His views were plainly too advanced for the age in which he lived; and, that he was ſenſible of this himſelf, appears from thoſe remarkable paſſages, in which he ſtyles himſelf, " The ſervant of poſterity," and " be-
" queaths his fame to future times."—HOBBES, who in his early youth, had enjoyed his friendſhip, ſpeaks, a conſiderable time after BACON's death, of experimental philoſophy, in terms of contempt; influenced probably, not a little, by the tendency he perceived in the inductive method of inquiry, to undermine the foundations of that fabric of ſcepticiſm which it was the great object of his labours to rear. Nay, even during the courſe of the laſt century, it has been leſs from BACON's own ſpeculations, than from the examples

examples of ſound inveſtigation exhibited by a few eminent men, who profeſſed to follow him as their guide, that the practical ſpirit of his writings has been caught by the multitude of phyſical Experimentaliſts over Europe;—truth and good ſenſe deſcending gradually, in this as in other inſtances, by the force of imitation and of early habit, from the higher orders of intellect to the lower. In ſome parts of the Continent, more eſpecially, the circulation of BACON's philoſophical works has been ſurpriſingly ſlow. It is doubtful, whether DES CARTES himſelf ever peruſed them; and, as late as the year 1759, if we may credit MONTUCLA, they were very little known in France. The introductory diſcourſe prefixed by D'ALEMBERT to the *Encyclopedie*, firſt recommended them, in that country, to general attention.

The change which has taken place, during the two laſt centuries, in the plan of phyſical reſearch, and the ſucceſs which has ſo remarkably attended it, could not fail to ſuggeſt an idea, that ſomething analogous might probably be accompliſhed at a future period, with reſpect to the

the phenomena of the intellectual world. And accordingly, various hints of this kind may be traced in different authors, ſince the æra of NEWTON's diſcoveries. A memorable inſtance occurs in the prediction with which that great man concludes his *Optics*;—"That if Natural "Philoſophy, in all its parts, by purſuing the "inductive method, ſhall at length be per-"fected, the bounds of Moral Philoſophy will "alſo be enlarged." Similar remarks may be found in other publications; particularly in Mr HUME's *Treatiſe of Human Nature*, where the ſubject is enlarged on with much ingenuity. As far, however, as I am able to judge, Dr REID was the firſt who conceived juſtly and clearly the analogy between theſe two different branches of human knowledge; defining with preciſion the diſtinct provinces of Obſervation and of Reflection, in furniſhing the *data* of all our reaſonings concerning Matter and Mind; and demonſtrating the neceſſity of a careful ſeparation between the phenomena which they reſpectively exhibit, while we adhere to the ſame mode of philoſophizing in inveſtigating the laws of both.

That

That ſo many philoſophers ſhould have thus miſſed their aim, in proſecuting the ſtudy of the Human Mind, will appear the leſs ſurpriſing, when we conſider, in how many difficulties, peculiar to itſelf, this ſcience is involved. It is ſufficient at preſent to mention thoſe which ariſe,—from the metaphorical origin of all the words which expreſs the intellectual phenomena;—from the ſubtle and fugitive nature of the objects of our reaſonings;—from the habits of inattention we acquire, in early life, to the ſubjects of our conſciouſneſs;—and from the prejudices which early impreſſions and aſſociations create to warp our opinions. It muſt be remembered, too, that in the ſcience of mind (ſo imperfectly are its logical rules as yet underſtood!) we have not the ſame checks on the abuſes of our reaſoning powers, which ſerve to guard us againſt error in our other reſearches. In phyſics, a ſpeculative miſtake is abandoned, when contradicted by facts which ſtrike the ſenſes. In mathematics, an abſurd or inconſiſtent concluſion is admitted as a demonſtrative proof of a faulty hypotheſis. But, in thoſe inquiries which relate to the principles of human nature, the abſurdities and inconſiſtencies to which we are led

by almoſt all the ſyſtems hitherto propoſed, inſtead of ſuggeſting corrections and improvements on theſe ſyſtems, have too frequently had the effect of producing ſcepticiſm with reſpect to all of them alike. How melancholy is the confeſſion of HUME!—"The intenſe view of theſe "manifold contradictions and imperfections in "human reaſon, has ſo wrought upon me, and "heated my brain, that I am ready to reject all "belief and reaſoning, and can look upon no "opinion even as more probable or likely than "another."

Under theſe diſcouragements to this branch of ſtudy, it affords us ſome comfort to reflect on the great number of important facts with reſpect to the mind, which are ſcattered in the writings of Philoſophers. As the ſubject of our inquiry here lies within our own breaſt, a conſiderable mixture of truth may be expected even in thoſe ſyſtems which are moſt erroneous; not only becauſe a number of men can ſcarcely be long impoſed on by a hypotheſis which is perfectly groundleſs, concerning the objects of their own conſciouſneſs; but becauſe it is generally by an alliance with truth and with the original

original principles of human nature, that prejudices and aſſociations produce their effects. Perhaps it may even be affirmed, that our progreſs in this reſearch depends leſs on the degree of our induſtry and invention, than on our ſagacity and good ſenſe in ſeparating old diſcoveries from the errors which have been blended with them; and on that candid and diſpaſſionate temper that may prevent us from being led aſtray by the love of novelty, or the affectation of ſingularity. In this reſpect, the ſcience of mind poſſeſſes a very important advantage over that which relates to the laws of the material world. The former has been cultivated with more or leſs ſucceſs in all ages and countries: the facts which ſerve as the baſis of the latter have, with a very few exceptions, been collected during the courſe of the two laſt centuries. An obſervation ſimilar to this is applied to ſyſtems of Ethics by Mr SMITH, in his account of the theory of MANDEVILLE; and the illuſtration he gives of it may be extended with equal propriety to the ſcience of mind in general. "A ſyſtem of Natural Philoſophy," he remarks, "may appear very plauſible, and

" be, for a long time, very generally received " in the world, and yet have no foundation in " nature, nor any ſort of reſemblance to the " truth. But it is otherwiſe with ſyſtems of " Moral Philoſophy. When a traveller gives an " account of ſome diſtant country, he may im- " poſe upon our credulity the moſt groundleſs " and abſurd fictions as the moſt certain mat- " ters of fact: But when a perſon pretends to " inform us of what paſſes in our neighbour- " hood, and of the affairs of the very pariſh we " live in, though here too, if we are ſo care- " leſs as not to examine things with our own " eyes, he may deceive us in many reſpects; " yet the greateſt falſehoods which he impoſes " on us muſt bear ſome reſemblance to the truth, " and muſt even have a conſiderable mixture " of truth in them."

Theſe conſiderations demonſtrate the eſſential importance, in this branch of ſtudy, of forming, at the commencement of our inquiries, juſt notions of the *criteria* of true and falſe ſcience, and of the rules of philoſophical inveſtigation. They demonſtrate, at the ſame time, that an attention to the rules of philoſophizing, as they are exemplified

exemplified in the phyſical reſearches of NEWTON and his followers, although the beſt of all preparations for an examination of the mental phenomena, is but one of the ſteps neceſſary to enſure our ſucceſs. On an accurate compariſon of the two ſubjects, it might probably appear, that after this preliminary ſtep has been gained, the moſt arduous part of the proceſs ſtill remains. One thing is certain, that it is not from any defect in the power of ratiocination or deduction, that our ſpeculative errors chiefly ariſe:—a fact of which we have a deciſive proof in the facility with which moſt ſtudents may be taught the mathematical and phyſical ſciences, when compared with the difficulty of leading their minds to the truth on queſtions of morals and politics.

The logical rules which lay the foundation of ſound and uſeful concluſions concerning the laws of this internal world, although not altogether overlooked by Lord BACON, were plainly not the principal object of his work; and what he has written on the ſubject, conſiſts chiefly of detached hints dropt caſually in the courſe of other ſpeculations. A comprehenſive View of

the ſciences and arts dependent on the philoſophy of the human mind, exhibiting the relations which they bear to each other, and to the general ſyſtem of human knowledge, would form a natural and uſeful introduction to the ſtudy of theſe logical principles; but ſuch a View remains ſtill a *deſideratum*, after all the advances made towards it by BACON and D'ALEMBERT. Indeed, in the preſent improved ſtate of things, much is wanting to complete and perfect that more ſimple part of their intellectual map which relates to the material univerſe.—Of the inconſiderable progreſs hitherto made towards a juſt delineation of the Method to be purſued in ſtudying the mental phenomena, no other evidence is neceſſary than this, That the ſources of error and falſe judgment, ſo peculiarly connected, in conſequence of the aſſociation of ideas, with ſtudies in which our beſt intereſts are immediately and deeply concerned, have never yet been inveſtigated with ſuch accuracy, as to afford effectual aid to the ſtudent, in his attempts to counteract their influence. One of theſe ſources alone,—that which ariſes from the imperfections of language,—furniſhes an exception

to

to the general remark. It attracted, fortunately, the particular notice of LOCKE, whoſe obſervations with reſpect to it, compoſe, perhaps, the moſt valuable part of his philoſophical writings; and, ſince the time of CONDILLAC, the ſubject has been ſtill more deeply analyzed by others. Even on this article, much yet remains to be done; but enough has been already accompliſhed to juſtify the profound aphoriſm in which BACON pointed it out to the attention of his followers:—"Credunt homines rationem ſuam "verbis imperare; ſed fit etiam ut verba vim "ſuam ſuper rationem retorqueant *."

Into theſe logical diſcuſſions concerning the means of advancing the philoſophy of human nature, Dr REID has ſeldom entered; and ſtill more rarely has he indulged himſelf in tracing the numerous relations, by which this philoſophy is connected with the practical buſineſs of life. But he has done what was ſtill more eſſential at

* This paſſage of BACON forms the motto to a very ingenious and philoſophical diſſertation, (lately publiſhed by M. PREVOST of Geneva), entitled, "*Des Signes enviſagés* "*relativement à leur Influence ſur la Formation des Idées.*" Paris, an 8.

the time he wrote: he has exemplified, with the happieſt ſucceſs, that method of inveſtigation by which alone any ſolid progreſs can be made; directing his inquiries to a ſubject which forms a neceſſary groundwork for the labours of his ſucceſſors,—an analyſis of the various powers and principles belonging to our conſtitution. Of the importance of this undertaking, it is ſufficient to obſerve, that it ſtands ſomewhat, although I confeſs not altogether, in the ſame relation to the different branches of intellectual and moral ſcience, (ſuch as grammar, rhetoric, logic, ethics, natural theology, and politics), in which the anatomy of the human body ſtands to the different branches of phyſiology and pathology. And as a courſe of medical education naturally, or rather neceſſarily, begins with a general ſurvey of man's animal frame; ſo, I apprehend, that the proper, or rather the eſſential preparation for thoſe ſtudies which regard our nobler concerns, is an examination of the principles which belong to man as an intelligent, active, ſocial, and moral being. Nor does the importance of ſuch an analyſis reſt here; it exerts an influence over all thoſe ſciences and arts which are connected

nected with the material world; and the philoſophy of BACON itſelf, while it points out the road to phyſical truth, is but a branch of the philoſophy of the human mind.

The ſubſtance of theſe remarks is admirably expreſſed by Mr HUME in the following paſſage,—allowances being made for a few trifling peculiarities of expreſſion, borrowed from the theories which were prevalent at the time when he wrote: "'Tis evident, that all the ſciences "have a relation, greater or leſs, to human na- "ture, and that, however wide any of them "may ſeem to run from it, they ſtill return "back by one paſſage or another. Even ma- "thematics, natural philoſophy, and natural "religion, are in ſome meaſure dependent on "the ſcience of man; ſince they lie under the "cogniſance of men, and are judged of by "their powers and faculties. It is impoſſible "to tell what changes and improvements we "might make in theſe ſciences, were we tho- "roughly acquainted with the extent and force "of human underſtanding, and could explain "the nature of the ideas we employ, and of "the operations we perform in our reaſonings.

"If,

" If, therefore, the ſciences of mathematics, " natural philoſophy, and natural religion, have " ſuch a dependence on the knowledge of man, " what may be expected in the other ſciences, " whoſe connection with human nature is more " cloſe and intimate? The ſole end of logic is " to explain the principles and operations of " our reaſoning faculty, and the nature of our " ideas: morals and criticiſm regard our taſtes " and ſentiments: And politics conſider men as " united in ſociety, and dependent on each " other. In theſe four ſciences of logic, morals, " criticiſm and politics, is comprehended almoſt " every thing which it can any way import us " to be acquainted with, or which can tend ei- " ther to the improvement or ornament of the " human mind.

" Here, then, is the only expedient from " which we can hope for ſucceſs in our philo- " ſophical reſearches; to leave the tedious, " lingering method, which we have hitherto " followed; and, inſtead of taking, now and " then, a caſtle or village on the frontier, to " march up directly to the capital or centre of " theſe ſciences, to human nature itſelf; which

" being

" being once maſters of, we may every where " elſe hope for an eaſy victory. From this ſta- " tion, we may extend our conqueſts over all " thoſe ſciences which more intimately concern " human life, and may afterwards proceed at " leiſure to diſcover more fully thoſe which " are the objects of pure curioſity. There is no " queſtion of importance, whoſe deciſion is not " comprized in the ſcience of man; and there " is none which can be decided with any cer- " tainty, before we become acquainted with " that ſcience."

To prepare the way for the accompliſhment of the deſign ſo forcibly recommended in the foregoing quotation, by exemplifying, in an analyſis of our moſt important intellectual and active principles, the only method of carrying it ſucceſsfully into execution, was the great object of Dr REID, in all his various philoſophical publications. In examining theſe principles, he had chiefly in view a vindication of thoſe fundamental laws of belief which form the groundwork of human knowledge, againſt the attacks made on their authority in ſome modern ſyſtems of ſcepticiſm; leaving to his

ſucceſſors

ſucceſſors the more agreeable taſk of applying the philoſophy of the mind to its practical uſes. On the *analyſis* and claſſification of our powers, which he has propoſed, much room for improvement muſt have been left in ſo vaſt an undertaking; but imperfections of this kind do not neceſſarily affect the juſtneſs of his concluſions, even where they may ſuggeſt to future inquirers the advantages of a ſimpler arrangement, and a more definite phraſeology. Nor muſt it be forgotten, that, in conſequence of the plan he has followed, the miſtakes which may be detected in particular parts of his works, imply no ſuch weakneſs in the fabric he has reared, as might have been juſtly apprehended, had he preſented a connected ſyſtem founded on gratuitous hypotheſes, or on arbitrary definitions. The detections, on the contrary, of his occaſional errors, may be expected, from the invariable conſiſtency and harmony of truth, to throw new lights on thoſe parts of his work, where his inquiries have been more ſucceſsful; as the correction of a particular miſtatement in an authentic hiſtory, is often found, by completing an imperfect link, or reconciling a ſeeming contradiction,

diction, to diſpel the doubts which hung over the moſt faithful and accurate details of the narrative.

In Dr REID's firſt performance, he confined himſelf entirely to the five ſenſes, and the principles of our nature neceſſarily connected with them; reſerving the further proſecution of the ſubject for a future period. At that time, indeed, he ſeems to have thought, that a more comprehenſive examination of the mind was an enterpriſe too great for one individual. "The powers," he obſerves, "of memory, of imagination, of "taſte, of reaſoning, of moral perception, the "will, the paſſions, the affections, and all the "active powers of the ſoul, preſent a boundleſs "field of philoſophical diſquiſition, which the "author of this *Inquiry* is far from thinking "himſelf able to explore with accuracy. Ma-"ny authors of ingenuity, ancient and modern, "have made incurſions into this vaſt territory, "and have communicated uſeful obſervations; "but there is reaſon to believe, that thoſe "who have pretended to give us a map of the "whole, have ſatisfied themſelves with a very "inaccurate and incomplete ſurvey. If GALI-

"LEO

"LEO had attempted a complete ſyſtem of na-
"tural philoſophy, he had probably done little
"ſervice to mankind; but, by confining him-
"ſelf to what was within his comprehenſion,
"he laid the foundation of a ſyſtem of know-
"ledge, which riſes by degrees, and does ho-
"nour to the human underſtanding. NEWTON,
"building upon this foundation, and in like
"manner, confining his inquiries to the law of
"gravitation, and the properties of light, per-
"formed wonders. If he had attempted a great
"deal more, he had done a great deal leſs, and
"perhaps nothing at all. Ambitious of follow-
"ing ſuch great examples, with unequal ſteps,
"alas! and unequal force, we have attempted
"an inquiry into one little corner only, of the
"human mind; that corner which ſeems to be
"moſt expoſed to vulgar obſervation, and to be
"moſt eaſily comprehended; and yet, if we
"have delineated it juſtly, it muſt be acknow-
"ledged, that the accounts heretofore given of
"it were very lame, and wide of the truth."

From theſe obſervations, when compared with the magnitude of the work which the author lived to execute, there is ſome ground for ſup-

poſing,

poſing, that, in the progreſs of his reſearches, he became more and more ſenſible of the mutual connection and dependence which exiſts among the concluſions we form concerning the various principles of human nature; even concerning thoſe which ſeem, on a ſuperficial view, to have the moſt remote relation to each other: And it was fortunate for the world, that, in this reſpect, he was induced to extend his views ſo far beyond the limits of his original deſign. His examination, indeed, of the powers of external perception, and of the queſtions immediately connected with them, bears marks of a ſtill more minute diligence and accuracy than appear in ſome of his ſpeculations concerning the other parts of our frame; and what he has written on the former ſubject, in his *Inquiry into the Human Mind*, is evidently more highly finiſhed both in matter and form, than the volumes which he publiſhed in his more advanced years. The value, however, of theſe is ineſtimable to future adventurers in the ſame arduous undertaking; not only, in conſequence of the aids they furniſh as a rough draught of the field to be examined, but, by the example they exhibit

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of a method of inveſtigation on ſuch ſubjects, hitherto very imperfectly underſtood by philoſophers. It is by the originality of this method, ſo ſyſtematically purſued in all his reſearches, ſtill more than by the importance of his particular concluſions, that he ſtands ſo conſpicuouſly diſtinguiſhed among thoſe who have hitherto proſecuted analytically the ſtudy of Man.

I have heard it ſometimes mentioned, as a ſubject of regret, that the writers who have applied themſelves to this branch of knowledge, have, in general, aimed at a great deal more than it was poſſible to accompliſh; extending their reſearches to all the different parts of our conſtitution, while a long life might be well employed in examining and deſcribing the phenomena connected with any one particular faculty. Dr REID, in a paſſage already quoted from his *Inquiry*, might have been ſuppoſed to give ſome countenance to this opinion; if his own ſubſequent labours did not ſo ſtrongly ſanction the practice in queſtion. The truth, I apprehend, is, That ſuch detached reſearches concerning the human mind, can ſeldom be attempted with much

much hope of ſucceſs; and that thoſe who have recommended them, have not attended ſufficiently to the circumſtances which ſo remarkably diſtinguiſh this ſtudy, from that which has for its object the philoſophy of the material world. A few remarks in illuſtration of this propoſition ſeem to me to be neceſſary, in order to juſtify the reaſonableneſs of Dr REID's undertaking; and they will be found to apply with ſtill greater force, to the labours of ſuch, as may wiſh to avail themſelves of a ſimilar analyſis in explaining the varieties of human genius and character, or in developing the latent capacities of the youthful mind.

One conſideration of a more general nature is, in the firſt place, worthy of notice; that in the infancy of every ſcience, the grand and fundamental *deſideratum* is a bold and comprehenſive Outline;—ſomewhat for the ſame reaſon, that, in the cultivation of an extenſive country, foreſts muſt be cleared, and wilderneſſes reclaimed, before the limits of private property are fixed with accuracy; and long before the period, when the diviſions and ſubdiviſions of ſeparate poſſeſſions

... details of a curious and refined ... speculations of Lord BACON ... objects of human knowledge. ... NEWTON and BOYLE were confined to ... included an aſtoniſhing range of ... univerſe. The labours of their ... in our own times, have been employ- ... with no leſs zeal, in purſuing thoſe more ... but equally abſtruſe inveſtigations, ... which They were unable to engage, for ... of a ſufficient ſtock, both of facts and ... general principles; and which did not per- ... intereſt their curioſity in any conſiderable degree.

If theſe obſervations are allowed to hold to a certain extent with reſpect to all the ſciences, they apply in a more peculiar manner to the ſubjects treated of in Dr REID'S writings;—ſubjects which are all ſo intimately connected, that it may be doubted, if it be poſſible to inveſtigate any one completely, without ſome general acquaintance, at leaſt, with the reſt. Even the theory of the Underſtanding may receive important lights from an examination of the Active and the Moral powers; the ſtate of which

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in the mind of every individual, will be found to have a powerful influence on his intellectual character:—while, on the other hand, an accurate analyſis of the faculties of the Underſtanding, would probably go far to obviate the ſceptical difficulties which have been ſtarted concerning the Origin of our Moral Ideas. It appears to me, therefore, that, whatever be the department of mental ſcience that we propoſe more particularly to cultivate, it is neceſſary to begin with a ſurvey of human nature in all its various parts; ſtudying theſe parts, however, not ſo much on their own account, as with a reference to the applications of which our concluſions are ſuſceptible to our favourite purpoſe. The reſearches of Dr REID, when conſidered carefully in the relation which they bear to each other, afford numberleſs illuſtrations of the truth of this remark. His leading deſign was evidently to overthrow the modern ſyſtem of ſcepticiſm; and at every ſucceſſive ſtep of his progreſs, new and unexpected lights break in on his fundamental principles.

It is, however, chiefly in their practical application to the conduct of the underſtanding,

the heart, that ſuch partial ... to be dangerous; for here, ... only to miſlead our theoretical ... but to counteract our improve- ... happineſs. Of this I am ſo fully ... that the moſt faulty theories of hu- ... nature, provided only they embrace the ... of it, appear to me leſs miſchievous in ... probable effects, than thoſe more accurate ... microſcopical reſearches which are habitu- ... confined to one particular corner of our ... conſtitution. It is eaſy to conceive, that where the attention is wholly engroſſed with the intellectual powers, the moral principles will be in danger of running to waſte: and it is no leſs certain, on the other hand, that, by confining our care to the moral conſtitution alone, we may ſuffer the underſtanding to remain under the influence of unhappy prejudices; and deſtitute of thoſe juſt and enlightened views, without which the worthieſt diſpoſitions are of little uſe, either to ourſelves or to ſociety. An excluſive attention to any one of the ſubordinate parts of our frame, — to the culture of taſte, (for example), or of the argumentative

powers,

powers, or even to the refinement of our moral ſentiments and feelings,—muſt be attended with a hazard proportionally greater.

"In forming the human character," ſays BACON, in a paſſage which Lord BOLINGBROKE has pronounced to be one of the fineſt and deepeſt in his writings, "we muſt not proceed, as a "ſtatuary does in forming a ſtatue, who works "ſometimes on the face, ſometimes on the limbs, "ſometimes on the folds of the drapery; but "we muſt proceed (and it is in our power to "proceed) as Nature does in forming a flower, "or any other of her productions;—ſhe throws "out altogether, and at once, the whole ſyſtem "of being, and the rudiments of all the parts. "*Rudimenta partium omnium ſimul parit et pro-"ducit**."

Of this paſſage, ſo ſtrongly marked with BACON's capacious intellect, and ſo richly adorned with his "philoſophical fancy," I will not

* In the foregoing paragraph, I have borrowed (with a very trifling alteration) Lord BOLINGBROKE's words, in a beautiful paraphraſe on BACON's remark.—See his *Idea of a Patriot King*.

weaken the impreſſion by any comment; and, indeed, to thoſe who do not intuitively perceive its evidenee, no comment would be uſeful.

In what I have hitherto ſaid of Dr Reid's ſpeculations, I have confined myſelf to ſuch general views of the ſcope of his reſearches, and of his mode of philoſophizing, as ſeemed moſt likely to facilitate the peruſal of his works to thoſe readers who have not been much converſant with theſe abſtract diſquiſitions. A ſlight review of ſome of the more important and fundamental objections which have been propoſed to his doctrines, may, I hope, be uſeful as a farther preparation for the ſame courſe of ſtudy.

Of theſe objections, the four following appear to me to be chiefly entitled to attention.

1. That he has aſſumed gratuitouſly in all his reaſonings, that theory concerning the human ſoul, which the ſcheme of materialiſm calls in queſtion.

2. That his views tend to damp the ardour of philoſophical curioſity, by ſtating as ultimate facts, phenomena which may be reſolved into principles more ſimple and general.

3. That,

3. That, by an unneceſſary multiplication of original or inſtinctive principles, he has brought the ſcience of mind into a ſtate more perplexed and unſatisfactory, than that in which it was left by LOCKE and his ſucceſſors.

4. That his philoſophy, by ſanctioning an appeal from the deciſions of the learned to the voice of the multitude, is unfavourable to a ſpirit of free inquiry, and lends additional ſtability to popular errors.

1. With reſpect to Dr REID'S ſuppoſed aſſumption of a doubtful hypotheſis concerning the nature of the thinking and ſentient principle, it is almoſt ſufficient for me to obſerve, that the charge is directed againſt that very point of his philoſophy in which it is moſt completely invulnerable. The circumſtance which peculiarly characterizes the inductive ſcience of mind is, that it profeſſes to abſtain from all ſpeculations concerning its nature and eſſence; confining the attention entirely to *phenomena*, for which we have the evidence of conſciouſneſs, and to the laws by which theſe phenomena are regulated. In this reſpect, it differs equally,

in its ſcope, from the pneumatological diſcuſſions of the ſchools; and from the no leſs viſionary theories, ſo loudly vaunted by the phyſiological metaphyſicians of more modern times. Compared with the firſt, it differs, as the inquiries of the *mechanical* philoſophers concerning the laws of moving bodies, differ from the diſcuſſions of the ancient ſophiſts concerning the exiſtence and the nature of motion. Compared with the other, the difference is analogous to what exiſts between the concluſions of NEWTON concerning the law of gravitation, and his *query* concerning the inviſible ether of which he ſuppoſed it might, poſſibly, be the effect. The facts which this inductive ſcience aims at aſcertaining, reſt on their own proper evidence; — an evidence unconnected with all theſe hypotheſes, and which would not, in the ſmalleſt degree, be affected, although the truth of any one of them ſhould be fully eſtabliſhed. It is not, therefore, on account of its inconſiſtency with any favourite opinions of my own, that I would oppoſe the diſquiſitions either of ſcholaſtic pneumatology, or of phyſiological metaphyſics; but becauſe I conſider them as an idle waſte of time

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and genius on queſtions where our concluſions can neither be verified nor overturned by an appeal to experiment or obſervation. Sir ISAAC NEWTON's query concerning the cauſe of gravitation was certainly not *inconſiſtent* with his own diſcoveries concerning its laws; but what would have been the conſequences to the world, if he had indulged himſelf in the proſecution of hypothetical theories with reſpect to the former, inſtead of directing his aſtoniſhing powers to an inveſtigation of the latter?

That the general ſpirit of Dr REID's Philoſophy is hoſtile to the concluſions of the Materialiſt, is indeed a fact: Not, however, becauſe his ſyſtem reſts on the contrary hypotheſis as a fundamental principle, but becauſe his inquiries have a powerful tendency to wean the underſtanding gradually from thoſe obſtinate aſſociations and prejudices, to which the common mechanical theories of mind owe all their plauſibility. It is, in truth, much more from ſuch examples of ſound reſearch concerning the Laws of Thought, than from any direct metaphyſical refutation, that a change is to be expected in the opinions of thoſe who have been accuſtomed

accuſtomed to confound together two claſſes of phenomena, ſo completely and eſſentially different.—But this view of the ſubject does not belong to the preſent argument.

It has been recommended of late, by a medical author of great reputation, to thoſe who wiſh to ſtudy the human mind, to begin with preparing themſelves for the taſk by the ſtudy of anatomy. I muſt confeſs, I cannot perceive the advantages of this order of inveſtigation; as the anatomy of the body does not ſeem to me more likely to throw light on the philoſophy of the mind, than an analyſis of the mind to throw light on the phyſiology of the body. To aſcertain, indeed, the general laws of their connexion from facts eſtabliſhed by obſervation or experiment, is a reaſonable and moſt intereſting object of philoſophical curioſity; and in this inquiry, (which was long ago propoſed and recommended by Lord BACON), a knowledge of the conſtitution both of mind and body is indiſpenſably requiſite; but even here, if we wiſh to proceed on firm ground, the two claſſes of facts muſt be kept completely diſtinct; ſo that neither of them may be warped or diſtorted, in conſequence of theories

theories ſuggeſted by their ſuppoſed relations or analogies*. Thus, in many of the phenomena, connected with Cuſtom and Habit, there is ample ſcope for inveſtigating general laws, both with reſpect to our mental and our corporeal frame; but what light do we derive from ſuch information concerning this part of our conſtitution as is contained in the following ſentence of Locke? "Habits ſeem to be but trains of motion in the "animal ſpirits, which, once ſet a-going, conti- "nue in the ſame ſteps they had been uſed to, "which by often treading are worn into a "ſmooth path." In like manner, the laws which regulate the connexion between the mind and our external organs, in the caſe of Perception, have furniſhed a very fertile ſubject of examination to ſome of the beſt of our modern philoſophers; but how impotent does the genius of Newton itſelf appear, when it attempts to ſhoot the gulf which ſeparates the ſenſible world, and the ſentient principle? "Is not the ſenſorium of ani- "mals," he aſks in one of his queries, "the "place where the ſentient ſubſtance is preſent, "and

* *Elements of the Philoſophy of the Human Mind*, pp. 11, 12. 2d edit.

" and to which the ſenſible ſpecies of things are " brought through the nerves and brain, that " they may be perceived by the mind preſent " in that place?"

It ought to be remembered alſo, that this inquiry, with reſpect to the laws regulating the connexion between our bodily organization, and the phenomena ſubjected to our own conſciouſneſs, is but one particular department of the philoſophy of the mind; and that there ſtill remains a wide and indeed boundleſs region, where all our *data* muſt be obtained from our own mental operations. In examining, for inſtance, the powers of judgment and reaſoning, let any perſon of ſound underſtanding, after peruſing the obſervations of BACON on the different claſſes of our prejudices, or thoſe of LOCKE on the abuſe of words, turn his attention to the ſpeculations of ſome of our contemporary theoriſts; and he will at once perceive the diſtinction between the two modes of inveſtigation which I wiſh at preſent to contraſt. " Reaſoning," ſays one of the moſt ingenious, and original of theſe, " is that " operation of the *ſenſorium*, by which we ex- " cite two or many tribes of ideas; and then " re-excite

" re-excite the ideas, in which they differ or " correſpond. If we determine this difference, " it is called Judgment; if we in vain endea- " vour to determine it, it is called Doubting.— " If we re-excite the ideas in which they dif- " fer, it is called Diſtinguiſhing; if we re-ex- " cite thoſe in which they correſpond, it is call- " ed Comparing *."—In what acceptation the word *idea* is to be underſtood in the foregoing paſſage, may be learned from the following definition of the ſame author:—" The word *idea* " has various meanings in the writers of me- " taphyſic: It is here uſed ſimply for thoſe no- " tions of external things, which our organs of " ſenſe bring us acquainted with originally; " and is defined, a contraction, or motion, or " configuration, of the fibres, which conſtitute " the immediate organ of ſenſe †."—Mr HUME, who was leſs of a phyſiologiſt than Dr DARWIN, has made uſe of a language by no means ſo theoretical and arbitrary; but ſtill widely removed from

* *Zoonomia*, vol. i. p. 181. 3d edit.

† *Ibid.* vol. i. pp. 11, 12.

from the ſimplicity and preciſion eſſentially neceſſary in ſtudies, where every thing depends on the cautious uſe of terms. "Belief," according to him, is "a lively idea related to or aſſociated "with a preſent impreſſion; Memory is the fa- "culty by which we repeat our impreſſions, ſo "as that they retain a conſiderable degree of "their firſt vivacity, and are ſomewhat inter- "mediate betwixt an idea and an impreſſion."

According to the views of Dr Reid, the terms which expreſs the ſimple powers of the mind, are conſidered as unſuſceptible of definition or explanation; the words, Feeling, for example, Knowledge, Will, Doubt, Belief, being, in this reſpect, on the ſame footing with the words, Green or Scarlet, Sweet or Bitter. To the names of theſe mental operations, all men annex ſome notions, more or leſs diſtinct; and the only way of conveying to them notions more correct, is by teaching them to exerciſe their own powers of reflection. The definitions quoted from Hume and Darwin, even if they were more unexceptionable in point of phraſeology, would, for theſe reaſons, be unphiloſophical, as attempts to ſimplify what is incapable of analyſis; but,

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as they are actually ſtated, they not only envelop truth in myſtery, but lay a foundation, at the very outſet, for an erroneous theory. It is worth while to add, that of the two theories in queſtion, that of DARWIN, how inferior ſoever, in the eſtimation of competent judges, as a philoſophical work, is by far the beſt calculated to impoſe on a very wide circle of readers, by the mixture it exhibits of crude and viſionary metaphyſics, with thoſe important facts and concluſions which might be expected from the talents and experience of ſuch a writer, in the preſent advanced ſtate of medical and phyſiological ſcience. The queſtions which have been hitherto confined to a few, prepared for ſuch diſcuſſions by habits of philoſophical ſtudy, are thus ſubmitted to the conſideration,—not only of the cultivated and enlightened minds, which adorn the medical profeſſion,—but of the half-informed multitude who follow the medical trade: Nor is it to be doubted, that many of theſe will give the author credit, upon ſubjects of which they feel themſelves incompetent to judge, for the ſame ability which he diſplays within their own profeſſional ſphere. The hypothetical

pothetical principles aſſumed by HUME are intelligible to thoſe only who are familiarized to the language of the ſchools; and his ingenuity and elegance, captivating as they are to men of taſte and refinement, poſſeſs ſlight attractions to the majority of ſuch as are moſt likely to be miſled by his concluſions.

After all, I do not apprehend that the phyſiological theories concerning the mind, which have made ſo much noiſe of late, will produce a very laſting impreſſion. The ſplendour of Dr DARWIN's accompliſhments could not fail to beſtow a temporary importance on whatever opinions were ſanctioned by his name; as the chemical diſcoveries which have immortalized that of PRIESTLEY, have, for a while, recalled from oblivion the reveries of HARTLEY. But, abſtracting from theſe accidental inſtances, in which human reaſon ſeems to have held a retrograde courſe, there has certainly been, ſince the time of DES CARTES, a continual, and, on the whole, a very remarkable approach to the inductive plan of ſtudying human nature. We may trace this in the writings even of thoſe who profeſs to conſider *thought* merely as *an agitation of the brain*;—

brain;—in the writings more particularly of HUME and of HELVETIUS; both of whom, although they may have occaſionally expreſſed themſelves in an unguarded manner concerning the nature of mind, have, in their moſt uſeful and practical diſquiſitions, been prevented, by their own good ſenſe, from blending any theory with reſpect to the *cauſes* of the intellectual phenomena with the hiſtory of facts, or the inveſtigation of general laws. The authors who form the moſt conſpicuous exceptions to this gradual progreſs, conſiſt chiefly of men, whoſe errors may be eaſily accounted for, by the prejudices connected with their circumſcribed habits of obſervation and inquiry;—of Phyſiologiſts, accuſtomed to attend to that part alone of the human frame, which the knife of the Anatomiſt can lay open; or of Chemiſts, who enter on the analyſis of Thought, freſh from the decompoſitions of the laboratory;—carrying into the Theory of Mind itſelf (what BACON expreſſively calls) "the ſmoke "and tarniſh of the furnace." Of the value of ſuch purſuits, none can think more highly than myſelf; but I muſt be allowed to obſerve, that the moſt diſtinguiſhed pre-eminence in them does not

[illegible] collected and ab-
[illegible] understanding superior
[illegible] association, and the
[illegible]. I will not go so
[illegible] ascribes to those who
[illegible] a more than ordinary
[illegible] *Magni est ingenii revoca-*
[illegible], *et cogitationem a consue-*
[illegible]" I would only claim for
[illegible] of patient and cautious re-
[illegible] would exact from their antagonists
[illegible]ications *.

[illegible] these remarks, I have no wish to
[illegible] one branch of useful knowledge at the
[illegible] of another, but to combat prejudices
[illegible] fatal to the progress of them all.—With
[illegible] same view, I cannot help taking notice of a
[illegible], but very mistaken idea, that the for-
[illegible] of a hypothetical system is a stronger proof
of inventive genius, than the patient investiga-
tion of Nature, in the way of induction. To
form a system, appears to the young and inex-
perienced understanding, a species of creation;
to ascend slowly to general conclusions, from the
observation

* Note D.

obſervation and compariſon of particular facts, is to comment ſervilely on the works of another.

No opinion, ſurely, can be more groundleſs. To fix on a few principles, or even on a ſingle principle, as the foundation of a theory; and, by an artful ſtatement of ſuppoſed facts, aided by a dexterous uſe of language, to give a plauſible explanation, by means of it, of an immenſe number of phenomena; is within the reach of moſt men whoſe talents have been a little exerciſed among the ſubtilties of the ſchools: Whereas, to follow Nature through all her varieties with a quick yet an exact eye;—to record faithfully what ſhe exhibits, and to record nothing more;—to trace, amidſt the diverſity of her operations, the ſimple and comprehenſive laws by which they are regulated, and ſometimes to gueſs at the beneficent purpoſes to which they are ſubſervient,—may be ſafely pronounced to be the higheſt effort of a created intelligence. And, accordingly, the number of ingenious theoriſts has, in every age, been great; that of ſound philoſophers has been wonderfully ſmall;—or rather, they are only beginning now to have a glimpſe of their way, in conſe-

quence of the combined lights furniſhed by their predeceſſors.

Des Cartes aimed at a complete ſyſtem of phyſics, deduced *à priori* from the abſtract ſuggeſtions of his own reaſon: Newton aſpired no higher, than at a faithful "interpretation of "Nature," in a few of the more general laws which ſhe preſents to our notice: And yet the intellectual power diſplayed in the voluminous writings of the former vaniſhes into nothing, when compared with what we may trace in a ſingle page of the latter. On this occaſion, a remark of Lord Bacon appears ſingularly appoſite; that "Alexander and Cæsar, though "they acted without the aid of magic or pro-"digy, performed exploits that are truly greater "than what Fable reports of King Arthur or "Amadis de Gaul."

I ſhall only add farther on this head, that the laſt obſervation holds more ſtrictly with reſpect to the philoſophy of the human mind, than any other branch of ſcience; for there is no ſubject whatever, on which it is ſo eaſy to form theories calculated to impoſe on the multitude; and none, where the diſcovery of truth is attend-

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ed with ſo many difficulties. One great cauſe of this is, the analogical or theoretical terms employed in ordinary language to expreſs every thing relating either to our intellectual or active powers; in conſequence of which, ſpecious explanations of the moſt myſterious phenomena may be given to ſuperficial inquirers; while, at the ſame time, the labour of juſt inveſtigation is increaſed to an incalculable degree.

2. To allege, that in this circumſcription of the field of our inquiries concerning the mind, there is any tendency to repreſs a reaſonable and philoſophical curioſity, is a charge no leſs unfounded than the former; inaſmuch as every phyſical inquiry concerning the material world is circumſcribed by limits preciſely analogous. In all our inveſtigations, whatever their ſubject may be, the buſineſs of philoſophy is confined to a reference of particular facts to other facts more general; and our moſt ſucceſsful reſearches muſt at length terminate in ſome law of nature, of which no explanation can be given. —In its application to Dr Reid's writings, this objection has, I think, been more pointedly directed againſt his reaſonings concerning the pro-

ceſs of nature in perception; a part of his writings which (as it is of fundamental importance in his general ſyſtem) he has laboured with peculiar care. The reſult is, indeed, by no means flattering to the pride of thoſe theoriſts, who profeſs to explain every thing; for it amounts to an acknowledgment, that, after all the lights which anatomy and phyſiology ſupply, the information we obtain, by means of our ſenſes, concerning the exiſtence and the qualities of matter, is no leſs incomprehenſible to our faculties, than it appears to the moſt illiterate peaſant; and that all we have gained, is a more preciſe and complete acquaintance with ſome particulars in our animal economy,—highly intereſting indeed when regarded in their proper light, as acceſſions to our phyſical knowledge, but, conſidered in connexion with the philoſophy of the mind, affording only a more accurate ſtatement of the aſtoniſhing phenomena which we would vainly endeavour to explain. This language has been charged, but moſt unjuſtly and ignorantly, with *myſticiſm*; for the ſame charge may be brought, with equal fairneſs againſt all the moſt important diſcoveries in the ſciences. It was in truth,

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the very objection urged againſt NEWTON, when his adverſaries contended, that *gravity* was to be ranked with the *occult qualities* of the ſchoolmen, till its mechanical cauſe ſhould be aſſigned; and the anſwer given to this objection by Sir ISAAC NEWTON's commentator, Mr MACLAURIN, may be literally applied, in the inſtance before us, to the inductive philoſophy of the human mind.

"The opponents of NEWTON, finding nothing "to object to his obſervations and reaſonings, "pretended to find a reſemblance between his "doctrines and the exploded tenets of the ſcho- "laſtic philoſophy. They triumphed mightily "in treating gravity as an occult quality, be- "cauſe he did not pretend to deduce this prin- "ciple fully from its cauſe. . . . . I know "not that ever it was made an objection to "the circulation of the blood, that there is "no ſmall difficulty in accounting for it me- "chanically. They, too, who firſt extend- "ed gravity to air, vapour, and to all bodies "round the earth, had their praiſe; though "the cauſe of gravity was as obſcure as before; "or *rather appeared more myſterious*, after they "had ſhewn, that there was no body found

" near the earth, exempt from gravity, that " might be ſuppoſed to be its cauſe. Why, " then, were his admirable diſcoveries, by which " this principle was extended over the univerſe, " ſo ill reliſhed by ſome philoſophers? The " truth is, he had, with great evidence, over- " thrown the boaſted ſchemes by which they " pretended to unravel all the myſteries of Na- " ture; and the philoſophy he introduced, in " place of them, carrying with it a ſincere con- " feſſion of our being far from a complete and " perfect knowledge of it, could not pleaſe thoſe " who had been accuſtomed to imagine them- " ſelves poſſeſſed of the eternal reaſons and pri- " mary cauſes of all things.

" It was, however, no new thing that this phi- " loſophy ſhould meet with oppoſition. All the " uſeful diſcoveries that were made in former " times, and particularly in the ſeventeenth cen- " tury, had to ſtruggle with the prejudices of " thoſe who had accuſtomed themſelves, not ſo " much as to think but in a certain ſyſtematic " way; who could not be prevailed on to " abandon their favourite ſchemes, while they " were able to imagine the leaſt pretext for

" continuing

" continuing the diſpute. Every art and talent " was diſplayed to ſupport their falling cauſe; " no aid ſeemed foreign to them that could in any " manner annoy their adverſary; and ſuch often was their obſtinacy, that truth was able to " make little progreſs, till they were ſucceeded " by younger perſons, who had not ſo ſtrongly " imbibed their prejudices."

Theſe excellent obſervations are not the leſs applicable to the ſubject now under conſideration, that the part of Dr REID's writings which ſuggeſted the quotation, leads only to the correction of an inveterate prejudice, not to any new general concluſion. It is probable, indeed, (now that the Ideal Theory has in a great meaſure diſappeared from our late metaphyſical ſyſtems), that thoſe who have a pleaſure in detracting from the merits of their predeceſſors, may be diſpoſed to repreſent it as an idle waſte of labour and ingenuity to have entered into a ſerious refutation of a hypotheſis at once gratuitous and inconceivable. A different judgment, however, will be formed by ſuch, as are acquainted with the extenſive influence, which, from the earlieſt accounts of ſcience, this ſingle prejudice

prejudice has had in vitiating almoſt every branch of the philoſophy of the mind; and who, at the ſame time, recollect the names of the illuſtrious men, by whom, in more modern times, it has been adopted as an incontrovertible principle. It is ſufficient for me to mention thoſe of BERKELEY, HUME, LOCKE, CLARKE and NEWTON. To the two firſt of theſe, it has ſerved as the baſis of their ſceptical concluſions, which ſeem indeed to follow from it as neceſſary conſequences; while the others repeatedly refer to it in their reaſonings, as one of thoſe facts concerning the mind, of which it would be equally ſuperfluous to attempt a proof or a refutation.

I have enlarged on this part of Dr REID's writings the more fully, as he was himſelf diſpoſed, on all occaſions, to reſt upon it his chief merit as an author. In proof of this, I ſhall tranſcribe a few ſentences from a letter of his to Dr GREGORY, dated 20th Auguſt 1790.

"It would be want of candour not to own, that "I think there is ſome merit in what you are "pleaſed to call *my Philoſophy;* but I think it lies "chiefly in having called in queſtion the common "theory of *Ideas or Images of things in the mind*

"being

" being the only objects of thought; a theory
" founded on natural prejudices, and ſo univer-
" ſally received as to be interwoven with the
" ſtructure of language. Yet were I to give
" you a detail of what led me to call in queſtion
" this theory, after I had long held it as ſelf-
" evident and unqueſtionable, you would think,
" as I do, that there was much of chance in the
" matter. The diſcovery was the birth of time,
" not of genius; and BERKELEY and HUME did
" more to bring it to light than the man that
" hit upon it. I think there is hardly any thing
" that can be called *mine* in the philoſophy of
" the mind, which does not follow with eaſe
" from the detection of this prejudice.

" I muſt, therefore, beg of you moſt earneſt-
" ly, to make no contraſt in my favour to the
" diſparagement of my predeceſſors in the ſame
" purſuit. I can truly ſay of them, and ſhall al-
" ways avow, what you are pleaſed to ſay of
" me, that but for the aſſiſtance I have received
" from their writings, I never could have wrote
" or thought what I have done."

3. Somewhat connected with the laſt objection, are the cenſures which have been ſo frequently

quently beſtowed on Dr Reid, for an unneceſſary and unſyſtematical multiplication of original or inſtinctive principles.

In reply to theſe cenſures, I have little to add to what I have remarked on the ſame topic, in the *Philoſophy of the Human Mind.* That the fault which is thus aſcribed to Dr Reid has been really committed by ſome ingenious writers in this part of the iſland, I moſt readily allow; nor will I take upon me to aſſert, that he has, in no inſtance, fallen into it himſelf. Such inſtances, however, will be found, on an accurate examination of his works, to be comparatively few, and to bear a very trifling proportion to thoſe, in which he has moſt ſucceſsfully and deciſively diſplayed his acuteneſs, in expoſing the premature and flimſy generalizations of his predeceſſors.

A certain degree of leaning to that extreme to which Dr Reid ſeems to have inclined, was, at the time when he wrote, much ſafer than the oppoſite bias. From the earlieſt ages, the ſciences in general, and more particularly the ſcience of the human mind, have been vitiated by an undue love of ſimplicity; and, in the courſe

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of the laſt century, this diſpoſition, after having been long diſplayed in ſubtile theories concerning the Active Powers, or the Principles of Human Conduct, has been directed to ſimilar refinements with reſpect to the Faculties of the Underſtanding, and the Truths with which they are converſant. Mr HUME himſelf has coincided ſo far with the HARTLEIAN ſchool, as to repreſent the "principle of union and coheſion "among our ſimple ideas as a kind of *attrac-* "*tion*, of as univerſal application in the Men- "tal world as in the Natural *;" and Dr HARTLEY, with a ſtill more ſanguine imagination, looked forward to an æra, "when future "generations ſhall put all kinds of evidences "and inquiries into mathematical forms; re- "ducing ARISTOTLE's ten categories, and Biſhop "WILKIN's forty *ſumma genera*, to the head of "quantity alone, ſo as to make mathematics and "logic, natural hiſtory and civil hiſtory, na- "tural philoſophy and philoſophy of all other "kinds, coincide *omni ex parte* †."

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* *Treatiſe of Human Nature*, vol. i. p. 30.

† HARTLEY *on Man*, p. 207. 4to edit. London, 1791.

It is needleſs to remark the obvious tendency of ſuch premature generalizations to withdraw the attention from the ſtudy of particular phenomena; while the effect of Reid's mode of philoſophizing, even in thoſe inſtances where it is carried to an exceſs, is to detain us, in this preliminary ſtep, a little longer than is abſolutely neceſſary. The truth is, that when the phenomena are once aſcertained, generalization is here of comparatively little value, and a taſk of far leſs difficulty than to obſerve facts with preciſion, and to record them with fairneſs.

In no part of Dr Reid's writings, I am inclined to think, could more plauſible criticiſms be made on this ground, than in his claſſification of our active principles; but even there, the facts are always placed fully and diſtinctly before the reader. That ſeveral of the benevolent affections which he has ſtated as ultimate facts in our conſtitution, might be analyzed into the ſame general principle differently modified, according to circumſtances, there can, in my opinion, be little doubt. This, however, (as I have elſewhere obſerved *), notwithſtanding the ſtreſs

* *Outlines of Moral Philoſophy*, pp. 79, 80. 2d edit. Edin. 1801.

ſtreſs which has been ſometimes laid upon it, is chiefly a queſtion of arrangement. Whether we ſuppoſe theſe affections to be all ultimate facts, or ſome of them to be reſolvable into other facts more general; they are equally to be regarded as conſtituent parts of human nature; and, upon either ſuppoſition, we have equal reaſon to admire the wiſdom with which that nature is adapted to the ſituation in which it is placed.—The laws which regulate the acquired perceptions of Sight, are ſurely as much a part of our frame, as thoſe which regulate any of our original perceptions; and, although they require, for their development, a certain degree of experience and obſervation in the individual, the uniformity of the reſult ſhews, that there is nothing arbitrary nor accidental in their origin. In this point of view, what can be more philoſophical, as well as beautiful, than the words of Mr FERGUSON, That "natural affec-" tion ſprings up in the ſoul of the mother, as " the milk ſprings in her breaſt, to furniſh nou-" riſhment to her child!"—"The effect is here " to the race," as the ſame author has excellently obſerved, "what the vital motion of the

" heart

" heart is to the individual; too neceſſary to " the preſervation of nature's works, to be " intruſted to the precarious will or intention " of thoſe moſt nearly concerned *."

The queſtion, indeed, concerning the origin of our different affections, leads to ſome curious analytical diſquiſitions; but is of very ſubordinate importance to thoſe inquiries which relate to their laws, and uſes, and mutual references. In many ethical ſyſtems, however, it ſeems to have been conſidered as the moſt intereſting ſubject of diſquiſition which this wonderful part of our frame preſents.

In Dr Reid's *Eſſays on the Intellectual Powers of Man*, and in his *Inquiry into the Human Mind*, I recollect little that can juſtly incur a ſimilar cenſure; notwithſtanding the ridicule which Dr Priestley has attempted to throw on the laſt of theſe performances, in his " *Table of* " Reid's *Inſtinctive Principles* †." To examine all

* *Principles of Moral and Political Science*, Part I. chap. 1. ſect. 3. *Of the principles of ſociety in human nature.*—The whole diſcuſſion unites, in a ſingular degree, the ſoundeſt philoſophy with the moſt eloquent deſcription.

† *Examination of* Reid's *Inquiry*, &c. London, 1774.

all the articles enumerated in that table, would require a greater latitude of diſquiſition than the limits of this memoir allow; and, therefore, I ſhall confine my obſervations to a few inſtances, where the precipitancy of the general criticiſm ſeems to me to admit of little diſpute. In this light I cannot help conſidering it, when applied to thoſe diſpoſitions or determinations of the mind, to which Dr REID has given the names of the *Principle of Credulity*, and the *Principle of Veracity*. How far theſe titles are happily choſen, is a queſtion of little moment; and on that point I am ready to make every conceſſion. I contend only for what is eſſentially connected with the objection which has given riſe to theſe remarks.

"That any man" (ſays Dr PRIESTLEY) "ſhould "imagine that a peculiar inſtinctive principle "was neceſſary to explain our giving credit to "the relations of others, appears to me, who have "been uſed to ſee things in a different light, very "extraordinary; and yet this doctrine is advan- "ced by Dr REID, and adopted by Dr BEATTIE. "But really" (he adds) "what the former ſays

" in favour of it, is hardly deſerving of the ſlight-
" eſt notice *."

The paſſage quoted by Dr PRIESTLEY, in juſtification of this very peremptory deciſion, is as follows: " If credulity were the effect of rea-
" ſoning and experience, it muſt grow up and
" gather ſtrength in the ſame proportion as
" reaſon and experience do. But if it is the
" gift of nature, it will be the ſtrongeſt in child-
" hood, and limited and reſtrained by experi-
" ence; and the moſt ſuperficial view of human
" life ſhews that this laſt is the caſe, and not the
" firſt."

To my own judgment, this argument of Dr REID's, when connected with the excellent illuſtrations which accompany it, carries complete conviction; and I am confirmed in my opinion by finding, that Mr SMITH (a writer inferior to none in acuteneſs, and ſtrongly diſpoſed by the peculiar bent of his genius, to ſimplify, as far as poſſible, the Philoſophy of Human Nature) has, in the lateſt edition of his *Theory of Moral Sentiments*, acquieſced in this very concluſion; urging in ſupport of it the ſame reaſoning which Dr PRIESTLEY

* *Examination of* REID's *Inquiry*, &c. p. 82.

PRIESTLEY affects to eſtimate ſo lightly. "There "ſeems to be in young children an inſtinctive "diſpoſition to believe whatever they are told. "Nature ſeems to have judged it neceſſary for "their preſervation that they ſhould, for ſome "time at leaſt, put implicit confidence in thoſe "to whom the care of their childhood, and of "the earlieſt and moſt neceſſary part of their "education, is intruſted. Their credulity, ac-"cordingly, is exceſſive, and it requires long "and much experience of the falſehood of man-"kind to reduce them to a reaſonable degree of "diffidence and diſtruſt *."—That Mr SMITH's opinion alſo coincided with Dr REID's, in what he has ſtated concerning the *principle of Veracity*, appears evidently from the remarks which immediately follow the paſſage juſt quoted.—But I muſt not add to the length of this memoir by unneceſſary citations.

Another inſtinctive principle mentioned by REID, is "our belief of the continuance of "the preſent courſe of nature."—"All our "knowledge of nature" (he obſerves) "be-"yond our original perceptions, is got by expe-

* SMITH's *Theory*, laſt edit. Part VII. ſect. 4.

" rience, and conſiſts in the interpretation of " natural ſigns. The appearance of the ſign is " followed by the belief of the thing ſignified. " Upon this principle of our conſtitution, not " only acquired perception, but alſo inductive " reaſoning, and all reaſoning from analogy, is " grounded; and, therefore, for want of a better " name, we ſhall beg leave to call it the *inductive* " *principle.* It is from the force of this prin- " ciple that we immediately aſſent to that axiom, " upon which all our knowledge of nature is " built, that effects of the ſame kind muſt have " th ſame cauſe. Take away the light of this " inductive principle, and experience is as blind " as a mole. She may indeed feel what is preſent, " and what immediately touches her, but ſhe " ſees nothing that is either before or behind, " upon the right hand or upon the left, future " or paſt."

On this doctrine, likewiſe, the ſame critic has expreſſed himſelf with much ſeverity; calling it " a mere quibble;" and adding, " Every ſtep " that I take among this writer's ſophiſms, raiſes " my aſtoniſhment higher than before." In this, however, as in many other inſtances, he has been led

led to cenſure Dr REID, not becauſe he was able to ſee farther than his antagoniſt, but becauſe he did not ſee quite ſo far. TURGOT, in an article inſerted in the French *Encyclopédie*, and CONDORCET, in a diſcourſe prefixed to one of his mathematical publications *, have, both of them, ſtated the fact with a true philoſophical preciſion; and, after doing ſo, have deduced from it an inference, not only the ſame in ſubſtance with that of Dr REID, but almoſt expreſſed in the ſame form of words.

In theſe references, as well as in that already made to Mr SMITH's *Theory*, I would not be underſtood to lay any undue ſtreſs on authority, in a philoſophical argument. I wiſh only, by contraſting the modeſty and caution reſulting from habits of profound thought, with that theoretical intrepidity which a blindneſs to inſuperable difficulties has a tendency to inſpire, to invite thoſe whoſe prejudices againſt this part of REID's ſyſtem reſt chiefly on the great names to which they conceive it to be hoſtile, to re-examine it

* *Eſſai ſur l'application de l'analyſe à la probabilité des deciſions rendues à la pluralité des voix.* Paris 1785.

with a little more attention, before they pronounce finally on its merits.

The prejudices which are apt to occur againſt a mode of philoſophizing, ſo mortifying to ſcholaſtic arrogance, are encouraged greatly by that natural diſpoſition, to refer particular facts to general laws, which is the foundation of all ſcientific arrangement; a principle of the utmoſt importance to our intellectual conſtitution, but which requires the guidance of a ſound and experienced underſtanding to accompliſh the purpoſes for which it was deſtined. They are encouraged alſo, in no inconſiderable degree, by the acknowledged ſucceſs of Mathematicians, in raiſing, on the baſis of a few ſimple *data*, the moſt magnificent, and at the ſame time the moſt ſolid, fabric of ſcience, of which human genius can boaſt. The abſurd references which Logicians are accuſtomed to make to EUCLID's *Elements of Geometry*, as a model which cannot be too ſtudiouſly copied, both in Phyſics and in Morals, have contributed, in this as in a variety of other inſtances, to miſlead philoſophers from the ſtudy of facts, into the falſe refinements of hypothetical theory.

On

On theſe miſapplications of Mathematical Method to ſciences which reſt ultimately on experiment and obſervation, I ſhall take another opportunity of offering ſome ſtrictures. At preſent, it is ſufficient to remark the peculiar nature of the truths about which pure or abſtract mathematics are converſant. As theſe truths have all a neceſſary connexion with each other, (all of them reſting ultimately on thoſe definitions or hypotheſes which are the principles of our reaſoning), the beauty of the ſcience cannot fail to increaſe in proportion to the ſimplicity of the *data*, compared with the incalculable variety of conſequences which they involve: And to the ſimplifications and generalizations of theory on ſuch a ſubject, it is perhaps impoſſible to conceive any limit. How different is the caſe in thoſe inquiries, where our firſt principles are not *definitions* but *facts*; and where our buſineſs is not to trace neceſſary connexions, but the laws which regulate the eſtabliſhed order of the univerſe!

In various attempts which have been lately made, more eſpecially on the Continent, towards a ſyſtematical expoſition of the elements of Phyſics, the effects of the miſtake I am now cenſu-

ring are extremely remarkable. The happy uſe of mathematical principles exhibited in the writings of NEWTON and his followers, having rendered an extenſive knowledge of them an indiſpenſable preparation for the ſtudy of the Mechanical Philoſophy, the early habits of thought acquired in the former purſuit are naturally transferred to the latter. Hence the illogical and obſcure manner in which its elementary principles have frequently been ſtated; an attempt being made to deduce from the ſmalleſt poſſible number of *data*, the whole ſyſtem of truths which it comprehends. The analogy exiſting among ſome of the fundamental laws of mechanics, beſtows, in the opinion of the multitude, an appearance of plauſibility on ſuch attempts; and their obvious tendency is to withdraw the attention from that unity of deſign, which it is the nobleſt employment of philoſophy to illuſtrate, by diſguiſing it under the ſemblance of an eternal and neceſſary order, ſimilar to what the mathematician delights to trace among the mutual relations of quantities and figures.

Theſe ſlight hints may ſerve as a reply in part to what Dr PRIESTLEY has ſuggeſted with reſpect to the conſequences likely to follow, if the ſpirit of

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REID's philoſophy ſhould be introduced into phyſics *.—One conſequence would unqueſtionably be, a careful ſeparation between the principles which we learn from experience alone, and thoſe which are fairly reſolvable, by mathematical or phyſical reaſoning, into other facts ſtill more general; and, of courſe, a correction of that falſe logic, which, while it throws an air of myſtery over the plaineſt and moſt undeniable facts, levels the ſtudy of nature, in point of moral intereſt, with the inveſtigations of the Geometer or of the Algebraiſt.

It muſt not, however, be ſuppoſed, that, in the preſent ſtate of Natural Philoſophy, a falſe logic threatens the ſame dangerous effects as in the Philoſophy of the Mind. It may retard ſomewhat the progreſs of the ſtudent at his firſt outſet; or it may confound, in his apprehenſions, the harmony of ſyſtematical order, with the conſiſtency and mutual dependency eſſential to a ſeries of mathematical theorems: but the fundamental truths of phyſics are now too well eſtabliſhed, and the checks which it furniſhes againſt ſophiſtry are too numerous and palpable,

* *Examination of* REID's *Inquiry*, p. 110.

palpable, to admit the poſſibility of any permanent error in our deductions. In the philoſophy of the mind, ſo difficult is the acquiſition of thoſe habits of Reflection which can alone lead to a correct knowledge of the intellectual *phænomena*, that a faulty hypotheſis, if ſkilfully fortified by the impoſing, though illuſory ſtrength of arbitrary definitions and a ſyſtematical phraſeology, may maintain its ground for a ſucceſſion of ages.

It will not, I truſt, be inferred from any thing I have here advanced, that I mean to offer an apology for thoſe, who, either in phyſics or morals, would preſumptuouſly ſtate their own opinions with reſpect to the laws of nature, as a bar againſt future attempts to ſimplify and generalize them ſtill farther. To aſſert, that none of the mechanical explanations yet given of Gravitation are ſatisfactory; and even to hint, that ingenuity might be more profitably employed than in the ſearch of ſuch a theory, is ſomething different from a gratuitous aſſumption of ultimate facts in phyſics; nor does it imply an obſtinate determination to reſiſt legitimate evidence, ſhould ſome fortunate inquirer,

rer,—contrary to what ſeems probable at preſent,—ſucceed where the genius of NEWTON has failed. If Dr REID has gone farther than this in his concluſions concerning the principles which he calls original or inſtinctive, he has departed from that guarded language in which he commonly expreſſes himſelf;—for all that it was of importance for him to conclude was, that the theories of his predeceſſors were, in theſe inſtances, exceptionable;—and the doubts he may occaſionally inſinuate, concerning the ſucceſs of future adventurers, ſo far from betraying any overweening confidence in his own underſtanding, are an indirect tribute to the talents of thoſe, from whoſe failure he draws an argument againſt the poſſibility of their undertaking.

The ſame eagerneſs to ſimplify and to generalize, which led PRIESTLEY to complain of the number of REID's inſtinctive principles, has carried ſome later philoſophers a ſtep farther. According to them, the very word *inſtinct* is unphiloſophical; and every thing either in man or brute, which has been hitherto referred to this myſterious ſource, may be eaſily account-

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ed for by experience or imitation. A few inſtances in which this doctrine appears to have been ſucceſsfully verified, have been deemed ſufficient to eſtabliſh it without any limitation.

In a very original work, on which I have already hazarded ſome criticiſms, much ingenuity has been employed in analyzing the wonderful efforts which the human infant is enabled to make for its own preſervation, the moment after its introduction to the light. Thus, it is obſerved, that the *fœtus*, while ſtill in the *uterus*, learns to perform the operation of ſwallowing; and alſo learns to relieve itſelf, by a change of poſture, from the irkſomeneſs of continued reſt: And, therefore, (if we admit theſe propoſitions), we muſt conclude, that ſome of the actions which infants are vulgarly ſuppoſed to perform in conſequence of inſtincts coeval with birth, are only a continuation of actions to which they were determined at an earlier period of their being. The remark is ingenious, and it may perhaps be juſt; but it does not prove, that *inſtinct* is an unphiloſophical term; nor does it render the operations of the infant

leſs

leſs myſterious than they ſeem to be on the common ſuppoſition. How far ſoever the analyſis, in ſuch inſtances, may be carried, we muſt at laſt arrive at ſome *phænomenon* no leſs wonderful than that we mean to explain:—in other words, we muſt ſtill admit as an ultimate fact, the exiſtence of an original determination to a particular mode of action ſalutary or neceſſary to the animal; and all we have accompliſhed is to connect the origin of this inſtinct with an earlier period in the hiſtory of the human mind.

The ſame author has attempted to account, in a manner ſomewhat ſimilar, for the different degrees in which the young of different animals are able, at the moment of birth, to exert their bodily powers. Thus, calves and chickens are able to walk almoſt immediately; while the human infant, even in the moſt favourable ſituations, is ſix or even twelve months old before he can ſtand alone. For this, Dr DARWIN aſſigns two cauſes. 1. That the young of ſome animals come into the world in a more complete ſtate than that of others:—the colt and lamb (for example) enjoying, in this reſpect, a ſtriking

ſtriking advantage over the puppy and the rabbit. 2. That the mode of walking of ſome animals, coincides more perfectly than that of others, with the previous motions of the *fœtus in utero*. The ſtruggles of all animals (he obſerves) in the womb, muſt reſemble their manner of ſwimming, as by this kind of motion, they can beſt change their attitude in water. But the ſwimming of the calf and of the chicken reſembles their ordinary movements on the ground, which they have thus learned in part to execute, while concealed from our obſervation; whereas, the ſwimming of the human infant differing totally from his manner of walking, he has no opportunity of acquiring the laſt of theſe arts till he is expoſed to our view.—The theory is extremely plauſible, and does honour to the author's ſagacity; but it only places in a new light that provident care which Nature has taken of all her offspring in the infancy of their exiſtence.

Another inſtance may contribute towards a more ample illuſtration of the ſame ſubject. A lamb, not many minutes after it is dropped, proceeds to ſearch for its nouriſhment in that ſpot

ſpot where alone it is to be found; applying both its limbs and its eyes to their reſpective offices. The peaſant obſerves the fact, and gives the name of *inſtinct*, or ſome correſponding term, to the unknown principle by which the animal is guided. On a more accurate examination of circumſtances, the philoſopher finds reaſon to conclude, that it is by the ſenſe of ſmelling, it is thus directed to its object. In proof of this, among other curious facts, the following has been quoted. "On diſſecting" (ſays GALEN) "a goat great with young, I found a "briſk *embryon*, and having detached it from "the *matrix*, and ſnatching it away before it "ſaw its dam, I brought it into a room where "there were many veſſels; ſome filled with "wine, others with oil, ſome with honey, "others with milk, or ſome other liquor; and "in others there were grains and fruits. We "firſt obſerved the young animal get upon its "feet and walk; then it ſhook itſelf, and af-"terwards ſcratched its ſide with one of its feet: "then we ſaw it ſmelling to every one of thoſe "things that were ſet in the room; and when "it had ſmelt to them all, it drank up the "milk."

" milk *." Admitting this very beautiful ſtory to be true, (and, for my own part, I am far from being diſpoſed to queſtion its probability), it only enables us to ſtate the fact with a little more preciſion, in conſequence of our having aſcertained, that it is to the ſenſe of ſmelling, the inſtinctive determination is attached. The concluſion of the peaſant is not here at variance with that of the philoſopher. It differs only in this, that he expreſſes himſelf in thoſe general terms which are ſuited to his ignorance of the particular proceſs by which Nature in this caſe accompliſhes her end; and, if he did otherwiſe, he would be cenſurable for prejudging a queſtion of which he is incompetent to form an accurate opinion.

The application of theſe illuſtrations to ſome of Dr REID's concluſions concerning the inſtinctive principles of the human mind, is, I flatter myſelf, ſufficiently manifeſt. They relate, indeed, to a ſubject which differs, in various reſpects, from that which has fallen under his more particular conſideration; but the ſame rules

* DARWIN, Vol. i. pp. 195, 196.

of philoſophizing will be found to apply equally to both.

4. The criticiſms which have been made on what Dr REID has written concerning the intuitive truths which he diſtinguiſhes by the title of *Principles of Common Senſe*, would require a more ample diſcuſſion, than I can now beſtow on them;—not that the importance of theſe criticiſms (of ſuch of them, at leaſt, as I have happened to meet with) demands a long or elaborate refutation; but becauſe the ſubject, according to the view I wiſh to take of it, involves ſome other queſtions of great moment and difficulty, relative to the foundations of human knowledge. Dr PRIESTLEY, the moſt formidable of Dr REID's antagoniſts, has granted as much in favour of this doctrine as it is worth while to contend for, on the preſent occaſion. "Had theſe writers" (he obſerves with reſpect to Dr REID and his followers) "aſſu-
"med, as the elements of their Common Senſe,
"certain truths which are ſo plain that no man
"could doubt of them, (without entering into
"the ground of our aſſent to them), their con-
"duct would have been liable to very little ob-

" jection. All that could have been ſaid would " have been, that, without any neceſſity, they " had made an innovation in the received uſe " of a term. For no perſon ever denied, that " there *are* ſelf-evident truths, and that theſe " muſt be aſſumed as the foundation of all our " reaſoning. I never met with any perſon who " did not acknowledge this, or heard of any " argumentative treatiſe that did not go upon " the ſuppoſition of it*." After ſuch an acknowledgment, it is impoſſible to forbear aſking, (with Dr CAMPBELL), " What is the great " point which Dr PRIESTLEY would controvert? " Is it, whether ſuch ſelf-evident truths ſhall " be denominated Principles of Common Senſe, " or be diſtinguiſhed by ſome other appella- " tion †?"

That the doctrine in queſtion has been, in ſome publications, preſented in a very exceptionable form, I moſt readily allow; nor would

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* *Examination of* Dr REID's *Inquiry*, &c. p. 119.

† *Philoſophy of Rhetoric*, vol. i. p. 111.—See Note E.

I be underſtood to ſubſcribe to it implicitly, even as it appears in the works of Dr REID. It is but an act of juſtice to him, however, to requeſt, that his opinions may be judged of from his own works alone, not from thoſe of others who may have happened to coincide with him in certain tenets, or in certain modes of expreſſion; and that, before any ridicule be attempted on his concluſions concerning the authority of Common Senſe, his antagoniſts would take the trouble to examine in what acceptation he has employed that phraſe.

The truths which Dr REID ſeems, in moſt inſtances, diſpoſed to refer to the judgment of this tribunal, might, in my opinion, be denominated more unexceptionably, "Fundamental Laws of "Human Belief." They have been called by a very ingenious foreigner, (M. TREMBLEY of Geneva), but certainly with a ſingular infelicity of language, *Préjugés Légitimes*.—Of this kind are the following propoſitions; "I am the ſame "perſon to-day that I was yeſterday;" "The "material world has an exiſtence independent "of that of percipient beings;" "There are "other intelligent beings in the univerſe beſide

" myſelf;" "The future courſe of nature will " reſemble the paſt." Such truths no man but a philoſopher ever thinks of ſtating to himſelf in words; but all our conduct and all our reaſonings proceed on the ſuppoſition that they are admitted. The belief of them is eſſential for the preſervation of our animal exiſtence; and it is accordingly coeval with the firſt operations of the intellect.

One of the firſt writers who introduced the phraſe *Common Senſe* into the technical or appropriate language of logic, was Father BUFFIER, in a book entitled, *Traité des Premières Verités.* It has ſince been adopted by ſeveral authors of note in this country; particularly by Dr REID, Dr OSWALD and Dr BEATTIE; by all of whom, however, I am afraid, it muſt be confeſſed, it has been occaſionally employed without a due attention to preciſion. The laſt of theſe writers uſes it * to denote that power by which the mind perceives the truth of any intuitive propoſition; whether it be an axiom of abſtract ſcience; or a ſtatement of ſome fact reſting on the immediate information of

* *Eſſay on Truth*, edition ſecond, p. 40. *et ſeq.*; alſo p. 166. *et ſeq.*

of conſciouſneſs, of perception, or of memory; or one of thoſe fundamental laws of belief which are implied in the application of our faculties to the ordinary buſineſs of life. The ſame extenſive uſe of the word may, I believe, be found in the other authors juſt mentioned. But no authority can juſtify ſuch a laxity in the employment of language in philoſophical diſcuſſions; for, if mathematical axioms be (as they are manifeſtly and indiſputably) a claſs of propoſitions eſſentially diſtinct from the other kinds of intuitive truths now deſcribed, why refer them all indiſcriminately to the ſame principle in our conſtitution? If this phraſe, therefore, be at all retained, preciſion requires, that it ſhould be employed in a more limited acceptation; and accordingly, in the works under our conſideration, it is appropriated moſt frequently, though by no means uniformly, to that claſs of Intuitive Truths which I have already called "Fundamental Laws of Belief*." When thus reſtricted, it conveys a notion, unambiguous at leaſt, and definite; and, conſequently, the que-

* This ſeems to be nearly the meaning annexed to the phraſe, by the learned and acute author of *the Philoſophy of Rhetoric*, vol. i. p. 109. *et ſeq.*

ſtion about its propriety or impropriety turns entirely on the coincidence of this definition with the meaning of the word as employed in ordinary diſcourſe. Whatever objections, therefore, may be ſtated to the expreſſion as now defined, will apply to it with additional force, when uſed with the latitude which has been already cenſured.

I have ſaid, that the queſtion about the propriety of the phraſe *Common Senſe* as employed by philoſophers, muſt be decided by an appeal to general practice: For, although it be allowable and even neceſſary for a philoſopher, to limit the acceptation of words which are employed vaguely in common diſcourſe, it is always dangerous to give to a word a ſcientific meaning eſſentially diſtinct from that in which it is uſually underſtood. It has, at leaſt, the effect of miſleading thoſe who do not enter deeply into the ſubject; and of giving a paradoxical appearance to doctrines, which, if expreſſed in more unexceptionable terms, would be readily admitted.

It appears to me, that this has actually happened in the preſent inſtance. The phraſe *Com-*

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mon Senſe, as it is generally underſtood, is nearly ſynonymous with *Mother-wit*; denoting that degree of ſagacity (depending partly on original capacity, and partly on perſonal experience and obſervation) which qualifies an individual for thoſe ſimple and eſſential occupations which all men are called on to exerciſe habitually by their common nature. In this acceptation, it is oppoſed to thoſe mental acquirements which are derived from a regular education, and from the ſtudy of books; and refers, not to the ſpeculative convictions of the underſtanding, but to that prudence and diſcretion which are the foundation of ſucceſsful conduct. Such is the idea which POPE annexes to the word, when, ſpeaking of good ſenſe, (which means only a more than ordinary ſhare of common ſenſe), he calls it

> "——————— the gift of Heaven,
> "And tho' no ſcience, fairly worth the ſeven."

To ſpeak, accordingly, of appealing from the concluſions of philoſophy to common ſenſe, had the appearance, to title-page readers, of appealing from the verdict of the learned to the voice

of the multitude; or of attempting to ſilence free diſcuſſion, by a reference to ſome arbitrary and undefinable ſtandard, diſtinct from any of the intellectual powers hitherto enumerated by logicians. Whatever countenance may be ſuppoſed to have been given by ſome writers to ſuch an interpretation of this doctrine, I may venture to aſſert, that none is afforded by the works of Dr Reid. The ſtandard to which he appeals, is neither the creed of a particular ſect, nor the inward light of enthuſiaſtic preſumption; but that conſtitution of human nature without which all the buſineſs of the world would immediately ceaſe;—and the ſubſtance of his argument amounts merely to this, that thoſe eſſential laws of belief to which ſceptics have objected, when conſidered in connexion with our ſcientific reaſonings, are implied in every ſtep we take as active beings; and if called in queſtion by any man in his practical concerns, would expoſe him univerſally to the charge of inſanity.

In ſtating this important doctrine, it were perhaps to be wiſhed, that the ſubject had been treated with ſomewhat more of analytical accuracy; and it is certainly to be regretted, that

a phraſe ſhould have been employed, ſo well calculated by its ambiguity to furniſh a convenient handle to miſrepreſentations; but in the judgment of thoſe who have peruſed Dr Reid's writings with an intelligent and candid attention, theſe miſrepreſentations muſt recoil on their authors; while they who are really intereſted in the progreſs of uſeful ſcience, will be diſpoſed rather to lend their aid in ſupplying what is defective in his views, than to reject haſtily a doctrine which aims, by the developement of ſome logical principles, overlooked in the abſurd ſyſtems which have been borrowed from the ſchools, to vindicate the authority of truths intimately and extenſively connected with human happineſs.

In the proſecution of my own ſpeculations on the Human Mind, I ſhall have occaſion to explain myſelf fully, concerning this as well as various other queſtions connected with the foundations of philoſophical Evidence. The new doctrines, and new phraſeology on that ſubject, which have lately become faſhionable among ſome Metaphyſicians in Germany, and which, in my opinion, have contributed not a little to involve

involve it in additional obſcurity, are a ſufficient proof that this eſſential and fundamental article of logic is not as yet completely exhauſted.

In order to bring the foregoing remarks within ſome compaſs, I have found it neceſſary to confine myſelf to ſuch objections as ſtrike at the root of Dr Reid's Philoſophy, without touching on any of his opinions on particular topics, however important. I have been obliged alſo to compreſs what I have ſtated, within narrower limits than were perhaps conſiſtent with complete perſpicuity; and to reject many illuſtrations which crowded upon me, at almoſt every ſtep of my progreſs.

It may not, perhaps, be ſuperfluous to add, that, ſuppoſing ſome of theſe objections to poſſeſs more force than I have aſcribed to them in my reply, it will not therefore follow, that little advantage is to be derived from a careful peruſal of the ſpeculations againſt which they are directed. Even they who diſſent the moſt widely from Dr Reid's concluſions, can

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ſcarcely fail to admit, that as a Writer he exhibits a ſtriking contraſt to the moſt ſucceſsful of his predeceſſors, in a logical preciſion and ſimplicity of language;—his ſtatement of facts being neither vitiated by phyſiological hypotheſis, nor obſcured by ſcholaſtic myſtery. Whoever has reflected on the infinite importance, in ſuch inquiries, of a ſkilful uſe of words as the eſſential inſtrument of thought, muſt be aware of the influence which his works are likely to have on the future progreſs of ſcience; were they to produce no other effect than a general imitation of his mode of reaſoning, and of his guarded phraſeology.

It is not indeed every reader to whom theſe inquiries are acceſſible; for habits of attention in general, and ſtill more habits of attention to the *phænomena* of thought, require early and careful cultivation: But thoſe who are capable of the exertion, will ſoon recogniſe, in Dr Reid's ſtatements, the faithful hiſtory of their own minds, and will find their labours amply rewarded by that ſatisfaction which always accompanies the diſcovery of uſeful truth. They may expect, alſo, to be rewarded by ſome intellectual

tellectual acquiſitions not altogether uſeleſs in their other ſtudies. An author well qualified to judge, from his own experience, of whatever conduces to invigorate or to embelliſh the underſtanding, has beautifully remarked, that "by "turning the ſoul inward on itſelf, its forces are "concentred, and are fitted for ſtronger and "bolder flights of ſcience; and that, in ſuch "purſuits, whether we take, or whether we loſe "the game, the chace is certainly of ſervice *." In this reſpect, the philoſophy of the mind (abſtracting entirely from that pre-eminence which belongs to it in conſequence of its practical applications) may claim a diſtinguiſhed rank among thoſe preparatory diſciplines, which another writer of no leſs eminence has happily compared to "the crops which are raiſed, not "for the ſake of the harveſt, but to be plough-"ed in as a dreſſing to the land †."

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* Preface to Mr BURKE's *Eſſay on the Sublime and Beautiful.*

† Biſhop BERKELEY's *Queriſt.*

SECTION THIRD.

Concluſion of the Narrative.

THE three works to which the foregoing remarks refer, together with the Eſſay on Quantity, publiſhed in the *Philoſophical Tranſactions of the Royal Society of London*, and a ſhort but maſterly Analyſis of Ariſtotle's Logic, which forms an Appendix to the third volume of Lord KAMES's *Sketches*, comprehend the whole of Dr REID's publications. The interval between the dates of the firſt and laſt of theſe amounts to no leſs than forty years, although he had attained to the age of thirty-eight before he ventured to appear as an author.

With the *Eſſays on the Active Powers of Man*, he cloſed his literary career; but he continued, notwithſtanding, to proſecute his ſtudies with unabated ardour and activity. The more modern improvements in chemiſtry attracted his particular notice; and he applied himſelf, with his wonted diligence and ſucceſs, to the ſtudy of its new doctrines and new nomenclature. He

amuſed

amuſed himſelf, alſo, at times, in preparing for a Philoſophical Society, of which he was a member, ſhort Eſſays on particular topics, which happened to intereſt his curioſity, and on which he thought he might derive uſeful hints from friendly diſcuſſion. The moſt important of theſe were, *An Examination of* PRIESTLEY'S *Opinions concerning Matter and Mind; Obſervations on the Utopia of* Sir THOMAS MORE; *and Phyſiological Reflections on Muſcular Motion.* This laſt eſſay appears to have been written in the eighty-ſixth year of his age, and was read by the author to his aſſociates, a few months before his death. His "thoughts were led to the "ſpeculations it contains," (as he himſelf mentions in the concluſion), "by the experience of "ſome of the effects which old age produces on "the muſcular motions."—"As they were oc-"caſioned, therefore," (he adds), "by the in-"firmities of age, they will, I hope, be heard "with the greater indulgence."

Among the various occupations with which he thus enlivened his retirement, the mathematical purſuits of his earlier years held a diſtinguiſhed place. He delighted to converſe about them

them with his friends; and often exerciſed his ſkill in the inveſtigation of particular problems. His knowledge of ancient geometry had not probably been, at any time, very extenſive; but he had cultivated diligently thoſe parts of mathematical ſcience which are ſubſervient to the ſtudy of Sir ISAAC NEWTON's Works. He had a predilection, more particularly, for reſearches requiring the aid of arithmetical calculation, in the practice of which he poſſeſſed uncommon expertneſs and addreſs. I think, I have ſometimes obſerved in him a ſlight and amiable vanity, connected with this accompliſhment.

The revival, at this period, of Dr REID's firſt ſcientific propenſity, has often recalled to me a favourite remark of Mr SMITH's, That of all the amuſements of old age, the moſt grateful and ſoothing is a renewal of acquaintance with the favourite ſtudies, and favourite authors, of our youth; a remark which, in his own caſe, ſeemed to be more particularly exemplified, while he was re-peruſing, with the enthuſiaſm of a ſtudent, the tragic poets of ancient Greece. I heard him at leaſt, repeat the obſervation

observation more than once, while SOPHOCLES or EURIPIDES lay open on his table.

In the case of Dr REID, other motives perhaps combined with the influence of the agreeable affections, to which Mr SMITH probably alludes. His attention was always fixed on the state of his intellectual faculties; and for counteracting the effects of time on these, mathematical studies seem to be fitted in a peculiar degree. They are fortunately, too, within the reach of many individuals, after a decay of memory disqualifies them for inquiries which involve a multiplicity of details. Such detached problems, more especially, as Dr REID commonly selected for his consideration; problems where all the *data* are brought at once under the eye, and where a connected train of thinking is not to be carried on from day to day; will be found, (as I have witnessed with pleasure in several instances), by those who are capable of such a recreation, a valuable addition to the scanty resources of a life protracted beyond the ordinary limit.

While he was thus enjoying an old age, happy in some respects beyond the usual lot of humanity, his domestic comfort suffered a deep

and incurable wound by the death of Mrs Reid. He had had the misfortune, too, of ſurviving, for many years, a numerous family of promiſing children; four of whom (two ſons and two daughters) died after they attained to maturity. One daughter only was left to him when he loſt his wife; and of her affectionate good offices he could not always avail himſelf, in conſequence of the attentions which her own huſband's infirmities required. Of this Lady, who is ſtill alive, (the widow of Patrick Carmichael, M. D *.), I ſhall have occaſion again to introduce the name, before I conclude this narrative.

A ſhort extract from a letter addreſſed to myſelf by Dr Reid, not many weeks after his wife's death, will, I am perſuaded, be acceptable to many, as an intereſting relic of the Writer.

"By the loſs of my boſom-friend, with whom "I lived fifty-two years, I am brought into a

* A learned and worthy Phyſician, who, after a long reſidence in Holland, where he practiſed medicine, retired to Glaſgow. He was a younger ſon of Profeſſor Gerschom Carmichael, who publiſhed, about the year 1720, an edition of Puffendorff, *De Officio Hominis et Civis*, and who is pronounced by Dr Hutcheson, "by far the "beſt commentator on that book."

" kind of new world, at a time of life when " old habits are not eaſily forgot, or new ones " acquired. But every world is GOD's world, " and I am thankful for the comforts he has left " me. Mrs CARMICHAEL has now the care of " two old deaf men, and does every thing in " her power to pleaſe them; and both are very " ſenſible of her goodneſs. I have more health " than at my time of life I had any reaſon to " expect. I walk about; entertain myſelf with " reading what I ſoon forget; can converſe with " one perſon, if he articulates diſtinctly, and is " within ten inches of my left ear; go to " church, without hearing one word of what is " ſaid. You know, I never had any pretenſions " to vivacity, but I am ſtill free from languor " and *ennui*.

" If you are weary of this detail, impute it to " the anxiety you expreſs to know the ſtate of " my health. I wiſh you may have no more un- " eaſineſs at my age,—being yours moſt affec- " tionately."

About four years after this event, he was prevailed on by his friend and relation Dr GREGORY, to paſs a few weeks, during the ſummer of

of 1796, at Edinburgh. He was accompanied by Mrs CARMICHAEL, who lived with him in Dr GREGORY's houſe; a ſituation which united, under the ſame roof, every advantage of medical care, of tender attachment, and of philoſophical intercourſe. As Dr GREGORY's profeſſional engagements, however, neceſſarily interfered much with his attentions to his gueſt, I enjoyed more of Dr REID's ſociety, than might otherwiſe have fallen to my ſhare. I had the pleaſure, accordingly, of ſpending ſome hours with him daily, and of attending him in his walking excurſions, which frequently extended to the diſtance of three or four miles.—His faculties (excepting his memory which was conſiderably impaired) appeared as vigorous as ever; and, although his deafneſs prevented him from taking any ſhare in general converſation, he was ſtill able to enjoy the company of a friend. Mr PLAYFAIR and myſelf were both witneſſes of the acuteneſs which he diſplayed on one occaſion, in detecting a miſtake, by no means obvious, in a manuſcript of his kinſman DAVID GREGORY, on the ſubject of *Prime and Ultimate Ratios*.—Nor

had his temper ſuffered from the hand of time, either in point of gentleneſs or of gaiety. "Inſtead of repining at the enjoyments of the "young, he delighted in promoting them; and, "after all the loſſes he had ſuſtained in his "own family, he continued to treat children "with ſuch condeſcenſion and benignity, that "ſome very young ones noticed the peculiar "kindneſs of his eye*."—In apparent ſoundneſs and activity of body, he reſembled more a man of ſixty than of eighty-ſeven.

He returned to Glaſgow in his uſual health and ſpirits; and continued, for ſome weeks, to devote, as formerly, a regular portion of his time to the exerciſe both of body and of mind. It appears, from a letter of Dr CLEGHORN's to Dr GREGORY, that he was ſtill able to work with his own hands in his garden; and he was found by Dr BROWN, occupied in the ſolution of an algebraical problem of conſiderable difficulty

* I have borrowed this ſentence from a juſt and elegant character of Dr REID, which appeared, a few days after his death, in one of the Glaſgow Journals. I had occaſion frequently to verify the truth of the obſervation during his laſt viſit to Edinburgh.

difficulty, in which, after the labour of a day or two, he at laſt ſucceeded. It was in the courſe of the ſame ſhort interval, that he committed to writing thoſe particulars concerning his anceſtors, which I have already mentioned.

This active and uſeful life was now, however, drawing to a concluſion. A violent diſorder attacked him about the end of September; but does not ſeem to have occaſioned much alarm to thoſe about him, till he was viſited by Dr CLEGHORN, who ſoon after communicated his apprehenſions in a letter to Dr GREGORY. Among other ſymptoms, he mentioned particularly "that alteration "of voice and features, which, though not eaſily "deſcribed, is ſo well known to all who have "opportunities of ſeeing life cloſe." Dr REID's own opinion of his caſe was probably the ſame with that of his phyſician; as he expreſſed to him on his firſt viſit, his hope that he was "ſoon to get his diſmiſſion." After a ſevere ſtruggle, attended with repeated ſtrokes of palſy, he died on the 7th of October following. Dr GREGORY had the melancholy ſatisfaction of viſiting his venerable friend on his death-

bed, and of paying him this unavailing mark of attachment, before his powers of recollection were entirely gone.

The only ſurviving deſcendant of Dr Reid is Mrs Carmichael, a daughter worthy in every reſpect of ſuch a father:—long, the chief comfort and ſupport of his old age, and his anxious nurſe in his laſt moments *.

In point of bodily conſtitution, few men have been more indebted to nature than Dr Reid. His form was vigorous and athletic; and his muſcular force (though he was ſomewhat under the middle ſize) uncommonly great;—advantages to which his habits of temperance and exerciſe, and the unclouded ſerenity of his temper, did ample juſtice. His countenance was ſtrongly expreſſive of deep and collected thought; but when brightened up by the face of a friend, what chiefly caught the attention was, a look of good-will and of kindneſs. A picture of him, for which he conſented, at the particular requeſt of Dr Gregory, to ſit to Mr Raeburn, during his laſt viſit to Edinburgh, is generally and juſtly ranked among the happieſt performances of that excellent artiſt. The medallion

* Note F.

lion of TASSIE, alſo, for which he ſat in the eighty-firſt year of his age, preſents a very perfect reſemblance.

I have little to add to what the foregoing pages contain with reſpect to his character. Its moſt prominent features were,—intrepid and inflexible rectitude;—a pure and devoted attachment to truth;—and an entire command (acquired by the unwearied exertions of a long life) over all his paſſions. Hence, in thoſe parts of his writings where his ſubject forces him to diſpute the concluſions of others, a ſcrupulous rejection of every expreſſion calculated to irritate thoſe whom he was anxious to convince; and a ſpirit of liberality and good-humour towards his opponents, from which no aſperity on their part could provoke him, for a moment, to deviate. The progreſs of uſeful knowledge, more eſpecially in what relates to human nature and to human life, he believed to be retarded rather than advanced by the intemperance of controverſy; and to be ſecured moſt effectually when intruſted to the ſlow but irreſiſtible influence of ſober reaſoning. That the argumentative talents of the diſputants might be improved by ſuch altercations, he was will-

ing to allow; but, conſidered in their connexion with the great objects which all claſſes of writers profeſs equally to have in view, he was convinced "that they have done more "harm to the practice, than they have done "ſervice to the theory, of morality *."

In private life, no man ever maintained, more eminently or more uniformly, the dignity of philoſophy; combining with the moſt amiable modeſty and gentleneſs, the nobleſt ſpirit of independence. The only preferments which he ever enjoyed, he owed to the unſolicited favour of the two learned bodies who ſucceſſively adopted him into their number; and the reſpectable rank which he ſupported in ſociety, was the well-earned reward of his own academical labours. The ſtudies in which he delighted, were little calculated to draw on him the patronage of the great; and he was unſkilled in the art of courting advancement, by "faſhioning his doctrines to the varying hour."

As a philoſopher, his genius was more peculiarly characterized by a ſound, cautious, diſtinguiſhing judgment; by a ſingular patience and perſeverance

* Preface to POPE's *Eſſay on Man*.

ſeverance of thought; and by habits of the moſt fixed and concentrated attention to his own mental operations;—endowments which, although not the moſt ſplendid in the eſtimation of the multitude, would ſeem entitled, from the hiſtory of ſcience, to rank among the rareſt gifts of the mind.

With theſe habits and powers, he united (what does not always accompany them) the curioſity of a naturaliſt, and the eye of an obſerver; and, accordingly, his information about every thing relating to phyſical ſcience, and to the uſeful arts, was extenſive and accurate. His memory for hiſtorical details was not ſo remarkable; and he uſed ſometimes to regret the imperfect degree in which he poſſeſſed this faculty. I am inclined, however, to think, that in doing ſo, he underrated his natural advantages; eſtimating the ſtrength of memory, as men commonly do, rather by the recollection of particular facts, than by the poſſeſſion of thoſe general concluſions, from a ſubſerviency to which, ſuch facts derive their principal value.

Towards

Towards the cloſe of life, indeed, his memory was much leſs vigorous than the other powers of his intellect; in none of which, could I ever perceive any ſymptom of decline. His ardour for knowledge, too, remained unextinguiſhed to the laſt; and, when cheriſhed by the ſociety of the young and inquiſitive, ſeemed even to increaſe with his years. What is ſtill more remarkable, he retained in extreme old age all the ſympathetic tenderneſs, and all the moral ſenſibility of youth; the livelineſs of his emotions, wherever the happineſs of others was concerned, forming an affecting contraſt to his own unconquerable firmneſs under the ſevereſt trials.

Nor was the ſenſibility which he retained, the ſelfiſh and ſterile offspring of taſte and indolence. It was alive and active, wherever he could command the means of relieving the diſtreſſes, or of adding to the comforts of others; and was often felt in its effects, where he was unſeen and unknown.—Among the various proofs of this, which have happened to fall under my own knowledge, I cannot help mentioning particularly (upon the moſt unqueſtionable authority) the ſecrecy with which he conveyed his occaſional benefactions to his former pariſhioners

at

at New-Machar, long after his eſtabliſhment at Glaſgow. One donation, in particular, during the ſcarcity of 1782,—a donation which, notwithſtanding all his precautions, was diſtinctly traced to his beneficence,—might perhaps have been thought diſproportionate to his limited income, had not his own ſimple and moderate habits multiplied the reſources of his humanity.

His opinions on the moſt important ſubjects are to be found in his works; and that ſpirit of piety which animated every part of his conduct, forms the beſt comment on their practical tendency. In the ſtate in which he found the philoſophical world, he believed, that his talents could not be ſo uſefully employed, as in combating the ſchemes of thoſe who aimed at the complete ſubverſion of religion, both natural and revealed;—convinced with Dr CLARKE, that, "as Chriſtianity preſuppoſes the truth of "Natural Religion, whatever tends to diſcre-"dit the latter, muſt have a proportionally "greater effect in weakening the authority of "the former*." In his views of both, he ſeems to

* *Collection of Papers which paſſed between* LEIBNITZ *and* CLARKE. See Dr CLARKE's Dedication.

to have coincided nearly with Biſhop BUTLER; an author whom he held in the higheſt eſtimation. A very careful abſtract of the treatiſe entitled *Analogy*, drawn up by Dr REID, many years ago, for his own uſe, ſtill exiſts among his manuſcripts; and the ſhort Diſſertation on Virtue which BUTLER has annexed to that work, together with the Diſcourſes on Human Nature publiſhed in his volume of Sermons, he uſed always to recommend as the moſt ſatisfactory account that has yet appeared of the fundamental principles of Morals: Nor could he conceal his regret, that the profound philoſophy which theſe Diſcourſes contain, ſhould of late have been ſo generally ſupplanted in England, by the ſpeculations of ſome other moraliſts, who, while they profeſs to idolize the memory of LOCKE, "approve little or nothing in his writings, but "his errors *."

Deeply impreſſed, however, as he was with his own principles, he poſſeſſed the moſt perfect liberality

* I have adopted here, the words which Dr CLARKE applied to ſome of Mr LOCKE's earlier followers. They are ſtill more applicable to many writers of the preſent times. See CLARKE's *firſt Reply to* LEIBNITZ.

liberality towards all whom he believed to be honeſtly and conſcientiouſly devoted to the ſearch of truth. With one very diſtinguiſhed character, the late Lord KAMES, he lived in the moſt cordial and affectionate friendſhip, notwithſtanding the avowed oppoſition of their ſentiments on ſome moral queſtions, to which he attached the greateſt importance. Both of them, however, were the friends of virtue and of mankind; and both were able to temper the warmth of free diſcuſſion, with the forbearance and good humour founded on reciprocal eſteem. No two men, certainly, ever exhibited a more ſtriking contraſt in their converſation, or in their conſtitutional tempers:—the one, ſlow and cautious in his deciſions, even on thoſe topics which he had moſt diligently ſtudied; reſerved and ſilent in promiſcuous ſociety; and retaining, after all his literary eminence, the ſame ſimple and unaffuming manners which he brought from his country reſidence:—the other, lively, rapid, and communicative; accuſtomed, by his profeſſional purſuits, to wield with addreſs the weapons of controverſy, and not averſe to a trial of his powers on queſtions

ſtions the moſt foreign to his ordinary habits of inquiry. But theſe characteriſtical differences, while to their common friends they lent an additional charm to the diſtinguiſhing merits of each, ſerved only to enliven their ſocial intercourſe, and to cement their mutual attachment.

I recollect few, if any anecdotes, of Dr Reid, which appear to me calculated to throw additional light on his character; and I ſuſpect ſtrongly, that many of thoſe which are to be met with in biographical publications, are more likely to miſlead, than to inform. A trifling incident, it is true, may ſometimes paint a peculiar feature better than the moſt elaborate deſcription; but a ſelection of incidents really characteriſtical, preſuppoſes, in the obſerver, a rare capacity to diſcriminate and to generalize; and where this capacity is wanting, a biographer, with the moſt ſcrupulous attention to the veracity of his details, may yet convey a very falſe conception of the individual he would deſcribe. As, in the preſent inſtance, my ſubject afforded no materials for ſuch a choice, I have attempted, to the beſt of my abilities, (inſtead of retailing

ing detached fragments of converſations, or recording inſulated and unmeaning occurrences), to communicate to others the general impreſſions which Dr REID's character has left on my own mind. In this attempt, I am far from being confident that I have ſucceeded; but, how barren ſoever I may have thus rendered my pages in the eſtimation of thoſe who conſider biography merely in the light of an amuſing tale, I have, at leaſt, the ſatisfaction to think, that my picture, though faint in the colouring, does not preſent a diſtorted reſemblance of the original.

The confidential correſpondence of an individual with his friends, affords to the ſtudent of human nature, materials of far greater authenticity and importance;—more particularly, the correſpondence of a man like Dr REID, who will not be ſuſpected by thoſe who knew him, of accommodating his letters (as has been alleged of CICERO) to the humours and principles of thoſe whom he addreſſed. I am far, at the ſame time, from thinking, that the correſpondence of Dr REID would be generally intereſting; or even that he excelled in this ſpecies of writing: but few men, I ſincerely believe,

lieve, who have written ſo much, have left behind them ſuch unblemiſhed memorials of their virtue.

At preſent, I ſhall only tranſcribe two letters, which I ſelect from a conſiderable number now lying before me, as they ſeem to accord, more than the others, with the general deſign of this Memoir. The firſt (which is dated January 13. 1779) is addreſſed to the Reverend WILLIAM GREGORY (now Rector of St Andrew's, Canterbury) then an Undergraduate in Balliol College, Oxford. It relates to a remarkable peculiarity in Dr REID's phyſical temperament, connected with the ſubject of dreaming; and is farther intereſting as a genuine record of ſome particulars in his early habits, in which it is eaſy to perceive the openings of a ſuperior mind.

"The fact which your brother the Doctor "deſires to be informed of, was as you men- "tion it. As far as I remember the circumſtan- "ces, they were as follow:

"About the age of fourteen, I was, almoſt eve- "ry night, unhappy in my ſleep from frightful "dreams. Sometimes hanging over a dreadful "precipice, and juſt ready to drop down; ſome- "times purſued for my life, and ſtopped by a "wall,

" wall, or by a ſudden loſs of all ſtrength; ſome-
" times ready to be devoured by a wild beaſt.
" How long I was plagued with ſuch dreams, I
" do not now recollect. I believe it was for a
" year or two at leaſt; and I think they had
" quite left me before I was fifteen. In thoſe
" days, I was much given to what Mr ADDISON,
" in one of his *Spectators*, calls *Caſtle-building*;
" and in my evening ſolitary walk, which was
" generally all the exerciſe I took, my thoughts
" would hurry me into ſome active ſcene, where
" I generally acquitted myſelf much to my own
" ſatisfaction; and in theſe ſcenes of imagina-
" tion, I performed many a gallant exploit. At
" the ſame time, in my dreams I found myſelf
" the moſt arrant coward that ever was. Not
" only my courage, but my ſtrength, failed me
" in every danger; and I often roſe from my
" bed in the morning in ſuch a panic, that it
" took ſome time to get the better of it. I wiſh-
" ed very much to get free of theſe uneaſy
" dreams, which not only made me unhappy in
" ſleep, but often left a diſagreeable impreſſion in
" my mind for ſome part of the following day.
" I thought it was worth trying, whether it was
" poſſible to recollect that it was all a dream,

" and that I was in no real danger. I often
" went to ſleep with my mind as ſtrongly im-
" preſſed as I could with this thought, that I
" never in my lifetime was in any real danger,
" and that every fright I had was a dream. Af-
" ter many fruitleſs endeavours to recollect this
" when the danger appeared, I effected it at laſt,
" and have often, when I was ſliding over a pre-
" cipice into the abyſs, recollected that it was
" all a dream, and boldly jumped down. The
" effect of this commonly was, that I imme-
" diately awoke. But I awoke calm and intre-
" pid, which I thought a great acquiſition. Af-
" ter this, my dreams were never very uneaſy;
" and, in a ſhort time, I dreamed not at all.

" During all this time, I was in perfect
" health; but whether my ceaſing to dream
" was the effect of the recollection above men-
" tioned, or of any change in the habit of my
" body, which is uſual about that period of life,
" I cannot tell. I think it may more probably
" be imputed to the laſt. However, the fact
" was, that, for at leaſt forty years after, I
" dreamed none, to the beſt of my remem-
" brance: and finding, from the teſtimony of
" others, that this is ſomewhat uncommon, I

" have

" have often, as ſoon as I awoke, endeavoured " to recollect, without being able to recollect, " any thing that paſt in my ſleep. For ſome " years paſt, I can ſometimes recollect ſome " kind of dreaming thoughts, but ſo incoherent " that I can make nothing of them.

" The only diſtinct dream I ever had ſince I " was about ſixteen, as far as I remember, was " about two years ago. I had got my head " bliſtered for a fall. A plaſter which was put " upon it after the bliſter, pained me exceſſive- " ly for a whole night. In the morning I ſlept " a little, and dreamed very diſtinctly, that I " had fallen into the hands of a party of In- " dians, and was ſcalped.

" I am apt to think, that as there is a ſtate of " ſleep, and a ſtate wherein we are awake, ſo " there is an intermediate ſtate, which partakes " of the other two. If a man peremptorily re- " ſolves to riſe at an early hour for ſome inte- " reſting purpoſe, he will of himſelf awake at " that hour. A ſick-nurſe gets the habit of " ſleeping in ſuch a manner that ſhe hears the " leaſt whiſper of the ſick perſon, and yet is re- " freſhed by this kind of half ſleep. The ſame " is the caſe of a nurſe who ſleeps with a child

" in her arms. I have ſlept on horſeback, but " ſo as to preſerve my balance; and if the " horſe ſtumbled, I could make the exertion " neceſſary for ſaving me from a fall, as if I " was awake.

" I hope the ſciences at your good Univerſity " are not in this ſtate. Yet, from ſo many " learned men, ſo much at their eaſe, one would " expect ſomething more than we hear of."

For the other letter, I am indebted to one of Dr Reid's moſt intimate friends, to whom it was addreſſed, in the year 1784, on occaſion of the melancholy event to which it alludes.

" I ſympathize with you very ſincerely in " the loſs of a moſt amiable wife. I judge of " your feelings by the impreſſion ſhe made up- " on my own heart, on a very ſhort acquaint- " ance. But all the bleſſings of this world are " tranſient and uncertain; and it would be but " a melancholy ſcene, if there were no proſpect " of another.

" I have often had occaſion to admire the re- " ſignation and fortitude of young perſons, even " of the weaker ſex, in the views of death, " when their imagination is filled with all the " gay proſpects which the world preſents at

" that

" that period. I have been witneſs to inſtan-
" ces of this kind, which I thought truly he-
" roic, and I hear Mrs G—— gave a remark-
" able one.

" To ſee the ſoul increaſe in vigour and wiſ-
" dom, and in every amiable quality, when
" health and ſtrength and animal ſpirits decay;
" when it is to be torn by violence from all
" that filled the imagination, and flattered hope,
" is a ſpectacle truly grand, and inſtructive to
" the ſurviving. To think, that the ſoul pe-
" riſhes in that fatal moment, when it is puri-
" fied by this fiery trial, and fitted for the
" nobleſt exertions in another ſtate, is an opi-
" nion which I cannot help looking down upon,
" with contempt and diſdain.

" In old people, there is no more merit in
" leaving this world with perfect acquieſcence,
" than in riſing from a feaſt after one is full.
" When I have before me the proſpect of the
" infirmities, the diſtreſſes, and the peeviſhneſs
" of old age, and when I have already received
" more than my ſhare of the good things of this
" life, it would be ridiculous indeed to be anxi-
" ous about prolonging it; but when I was
" four and twenty, to have had no anxiety for

" its continuance, would, I think, have required
" a noble effort. Such efforts in thoſe that are
" called to make them, ſurely ſhall not loſe
" their reward."

* * * * *

I HAVE now finiſhed all that the limits of my plan permit me to offer here, as a tribute to the memory of this excellent perſon. In the details which I have ſtated, both with reſpect to his private life and his ſcientific purſuits, I have dwelt chiefly on ſuch circumſtances as appeared to me moſt likely to intereſt the readers of his Works, by illuſtrating his character as a man, and his views as an author. Of his merits as an inſtructor of youth, I have ſaid but little; partly from a wiſh to avoid unneceſſary diffuſeneſs; but chiefly from my anxiety to enlarge on thoſe ſtill more important labours, of which he has bequeathed the fruits to future ages. And yet, had he left no ſuch monument to perpetuate his name, the fidelity and zeal with which he diſcharged, during ſo long a period, the obſcure but momentous duties of his official ſtation, would, in the judgment of the wiſe and good, have ranked him in the firſt order of uſe-

ful

ful citizens.—" Nec enim is ſolus reipublicæ
" prodeſt, qui candidatos extrahit, et tuetur
" reos, et de pace belloque cenſet; ſed qui ju-
" ventutem exhortatur; qui, in tantâ bonorum
" præceptorum inopiâ, virtute inſtruit animos;
" qui, ad pecuniam luxuriamque curſu ruentes
" prenſat ac retrahit, et, ſi nihil aliud, certe
" moratur: in privato, publicum negotium
" agit *."

In concluding this memoir, I truſt I ſhall be pardoned, if, for once, I give way to a perſonal feeling, while I expreſs the ſatisfaction with which I now cloſe finally, my attempts as a Biographer. Thoſe which I have already made, were impoſed on me by the irreſiſtible calls of duty and attachment; and, feeble as they are, when compared with the magnitude of ſubjects ſo ſplendid and ſo various, they have encroached deeply on that ſmall portion of literary leiſure which indiſpenſable engagements allow me to command. I cannot, at the ſame time, be inſenſible to the gratification of having endeavoured to aſſociate, in ſome degree, my name

* Seneca, *De Tranquill. An.* Cap. 3.

with three of the greateſt which have adorned this age;—happy, if without deviating intentionally from truth, I may have ſucceeded, however imperfectly, in my wiſh, to gratify, at once, the curioſity of the public, and to ſooth the recollections of ſurviving friends.——But I, too, have deſigns and enterprizes of my own; and the execution of theſe (which alas! ſwell in magnitude, as the time for their accompliſhment haſtens to a period) claims at length, an undivided attention. Yet I ſhould not look back on the paſt with regret, if I could indulge the hope, that the facts which it has been my province to record,—by diſplaying thoſe fair rewards of extenſive uſefulneſs, and of permanent fame, which talents and induſtry, when worthily directed, cannot fail to ſecure,—may contribute, in one ſingle inſtance, to foſter the proud and virtuous independence of genius; or, amidſt the gloom of poverty and ſolitude, to gild the diſtant proſpect of the unfriended ſcholar, whoſe laurels are now ſlowly ripening in the unnoticed privacy of humble life.

NOTES.

NOTES*.

NOTE A. Page 5.

IN the account, given in the text, of Dr REID'S anceſtors, I have followed ſcrupuloufly the information contained in his own memorandums. I have ſome ſuſpicion, however, that he has committed a miſtake with reſpect to the name of the tranſlator of BUCHANAN'S *Hiſtory;* which would appear, from the MS. in Glaſgow College, to have been—not ADAM, but JOHN. At the ſame time,

* If another Edition of this Memoir ſhould ever be called for, I muſt requeſt that the Printer may adhere to the plan which I myſelf have thought adviſable to adopt, in the diſtribution of my notes. A miſtake which has been committed in a late Edition of my Life of Dr ROBERTSON, where a long Appendix is broken down into *foot-notes*, will ſufficiently account for this requeſt, to thoſe who have ſeen that publication.

time, as this laſt ſtatement reſts on an authority altogether unknown, (being written in a hand different from the reſt of the MS.), there is a poſſibility that Dr REID's account may be correct; and, therefore, I have thought it adviſeable, in a matter of ſo very trifling conſequence, to adhere to it in preference to the other.

The following particulars with reſpect to THOMAS REID may, perhaps, be acceptable to ſome of my readers. They are copied from DEMPSTER, a contemporary writer; whoſe details concerning his countrymen, it muſt, however, be confeſſed, are not always to be implicitly relied on.

" THOMAS REIDUS Aberdonènſis, pueritiæ " meæ et infantilis otii ſub THOMA CARGILLO " collega, Lovanii literas in ſchola Lipſii ſeriò " didicit, quas magno nomine in Germania do- " cuit, carus Principibus. Londini diu in co- " mitatu humaniſſimi ac clariſſimi viri, FULCO- " NIS GREVILLI, Regii Conſiliarii Interioris " et Angliæ Proquæſtoris, egit: tum ad amici- " tiam Regis, eodem FULCONE deducente, evec- " tus, inter Palatinos admiſſus, à literis Latinis " Regi fuit. Scripſit multa, ut eſt magnâ indole

et

" et variâ eruditione," &c.—" Ex aula se, nemine
" conscio, nuper proripuit, dum illi omnia fes-
" tinati honoris augmenta singuli ominarentur,
" nec quid deinde egerit aut quò locorum se
" contulerit quisquam indicare potuit. Multi
" suspicabantur, tædio aulæ affectum, monasti-
" cæ quieti seipsum tradidisse, sub annum 1618.
" Rumor postea fuit in aulam rediisse, et me-
" ritissimis honoribus redditum, sed nunquam
" id consequetur quod virtus promeretur."—
Hist. Ecclesiastica Gentis Scotorum, lib. xvi. p. 576.

What was the judgment of THOMAS REID's own times with respect to his genius, and what their hopes of his posthumous fame, may be collected from an elegy on his death by his learned countryman ROBERT AYTOUN. Already, before the lapse of two hundred years, some apology, alas! may be thought necessary for an attempt to rescue his name from total oblivion.

AYTOUN's elegy on REID is referred to in terms very flattering both to its author and to its subject, by the editor of the Collection, entitled, " *Poëtarum Scotorum Musæ Sacræ*." " In obi-
" tum THOMÆ RHEIDI epicedium extat elegan-
" tissimum ROBERTI AYTONI, viri literis ac dig-
" nitate

"ætate clariſſimi, in Deliciis Poëtarum Scoto-
"rum, ubi et ipſius quoque poëmata, paucula
"quidem illa, ſed venuſta, ſed elegantia, com-
"parent."

The only works of ALEXANDER REID of which I have heard, are *Chirurgical Lectures on Tumors and Ulcers*, London 1635; and a *Treatiſe of the Firſt Part of Chirurgerie*, London 1638. He appears to have been the phyſician and friend of the celebrated mathematician THOMAS HARRIOTT, of whoſe intereſting hiſtory ſo little was known, till the recent diſcovery of his manuſcripts by Mr ZACH of Saxe-Gotha.

A remarkable inſtance of the careleſs or capricious orthography formerly ſo common in writing proper names, occurs in the different individuals to whom this note refers. Sometimes the family name is written *Reid*; on other occaſions, *Riede*, *Read*, *Rhead* or *Rhaid*.

NOTE B. Page 7.

Dr TURNBULL's work on Moral Philoſophy was publiſhed at London in 1740. As I have only turned over a few pages, I cannot ſay any thing with reſpect to its merits. The mottos on the title-page are curious, when conſidered

in

in connexion with thoſe inquiries which his pupil afterwards proſecuted with ſo much ſucceſs; and may, perhaps without his perceiving it, have had ſome effect in ſuggeſting to him that plan of philoſophizing which he ſo ſyſtematically and ſo happily purſued.

" If Natural Philoſophy, in all its parts, by " purſuing this method, ſhall at length be per- " fected, the bounds of Moral Philoſophy will " alſo be enlarged."

NEWTON's *Optics*.

" Account for Moral, as for Natural things."

POPE.

For the opinion of a very competent judge with reſpect to the merits of the Treatiſe on Ancient Painting, *vide* HOGARTH's Print, entitled, *Beer-Lane*.

NOTE C. Page 35.

" Dr MOOR combined," &c.]—JAMES MOOR, L L. D. Author of a very ingenious Fragment on Greek Grammar, and of other philological Eſſays. He was alſo diſtinguiſhed by a profound acquaintance with ancient Geometry. Dr SIM-

SON,

SON, an excellent judge of his merits both in literature and ſcience, has ſomewhere honoured him with the following encomium:—"Tum "in Matheſi, tum in Græcis Literis multum "et feliciter verſatus."

"The WILSONS, (both father and ſon)," &c.] —ALEXANDER WILSON, M. D. and PATRICK WILSON, Eſq; well known over Europe by their Obſervations on the Solar Spots; and many other valuable memoirs.

NOTE D. Page 82.

A writer of great talents, (after having reproached Dr REID with "a groſs ignorance, diſ- "graceful to the Univerſity of which he was a "member)," boaſts of the trifling expence of time and thought which it had coſt himſelf to overturn his Philoſophy. "Dr OSWALD is pleaſed "to pay me a compliment in ſaying, that "I "might employ myſelf to more advantage to "the public, by purſuing other branches of ſci- "ence, than by deciding raſhly on a ſubject "which he ſees I have not ſtudied." In return "to this compliment, I ſhall not affront him, by "telling

" telling him how very little of my time this " buſineſs has hitherto taken up. If he al- " ludes to my *experiments*, I can aſſure him, that " I have loſt no time at all; for having been " intent upon ſuch as require the uſe of a burn- " ing lens, I believe I have not loſt one hour " of ſunſhine on this account. And the public " may perhaps be informed, ſome time or other, " of what I have been doing in the *ſun*, as well " as in the *ſhade*."——*Examination of* REID's *Inquiry*, &c. p. 357. See alſo pp. 101, 102. of the ſame work.

NOTE E. Page 114.

The following ſtrictures on Dr PRIESTLEY's *Examination*, *&c.* are copied from a very judicious note in Dr CAMPBELL's *Philoſophy of Rhetoric*, Vol. I. p. 111.

——" I ſhall only ſubjoin two remarks on this " book. The firſt is, That the author, through " the whole, confounds two things totally di- " ſtinct,—certain aſſociations of ideas, and cer- " tain judgments implying belief, which, though " in *ſome*, are not in *all* caſes, and therefore not " *neceſſarily* connected with aſſociation. And

" if

" if ſo, merely to account for the aſſociation, is " in no caſe to account for the belief with " which it is attended. Nay, admitting his plea, " (p. 86.), that by the principle of aſſociation, " not only the ideas, but the concomitant be- " lief may be accounted for, even this does not " invalidate the doctrine he impugns. For, let " it be obſerved, that it is one thing to aſſign a " cauſe, which, from the mechaniſm of our na- " ture, has given riſe to a particular tenet of " belief, and another thing to produce a reaſon " by which the underſtanding has been convin- " ced. Now, unleſs this be done as to the prin- " ciples in queſtion, they muſt be conſidered as " primary truths in reſpect of the underſtanding, " which never deduced them from other truths, " and which is under a neceſſity, in all her mo- " ral reaſonings, of founding upon them. In " fact, to give any other account of our convic- " tion of them, is to confirm, inſtead of confu- " ting the doctrine, that in all argumentation " they muſt be regarded as primary truths, or " truths which reaſon never inferred through " any medium, from other truths previouſly per- " ceived. My ſecond remark is, That though

" this

" this examiner has, from Dr REID, given us a " catalogue of firſt principles, which he deems " unworthy of the honourable place aſſigned " them, he has no where thought proper to give " us a liſt of thoſe ſelf-evident truths, which, by " his own account, and in his own expreſs " words, " muſt be aſſumed as the foundation " of all our reaſoning." How much light might " have been thrown upon the ſubject by the " contraſt! Perhaps we ſhould have been en- " abled, on the compariſon, to diſcover ſome " diſtinctive characters in his genuine axioms, " which would have preſerved us from the dan- " ger of confounding them with their ſpurious " ones. Nothing is more evident than that, in " whatever regards matter of fact, the mathe- " matical axioms will not anſwer. Theſe are " purely fitted for evolving the abſtract rela- " tions of quantity. This he in effect owns " himſelf (p. 39.) It would have been obliging, " then, and would have greatly contributed to " ſhorten the controverſy, if he had given us, at " leaſt, a ſpecimen of thoſe ſelf-evident prin- " ciples, which, in his eſtimation, are the *non* " *plus ultra* of moral reaſoning."

NOTE F. Page 184.

Dr REID's father, the Reverend LEWIS REID, married, for his ſecond wife, JANET, daughter of Mr FRASER of Phopachy, in the county of Invernels. A daughter of this marriage is ſtill alive; the wife of the Reverend ALEXANDER LESLIE, and the mother of the Reverend JAMES LESLIE, miniſters of Fordoun. To the latter of theſe gentlemen, I am indebted for the greater part of the information I have been able to collect with reſpect to Dr REID, previous to his removal to Glaſgow;—Mr LESLIE's regard for the memory of his uncle having prompted him, not only to tranſmit to me ſuch particulars as had fallen under his own knowledge, but ſome valuable letters on the ſame ſubject, which he procured from his relations and friends in the north.

For all the members of this moſt reſpectable family, Dr REID entertained the ſtrongeſt ſentiments of affection and regard. During ſeveral years before his death, a daughter of Mrs LESLIE's was a conſtant inmate of his houſe, and

and added much to the happiness of his small domestic circle.

Another daughter of Mr LEWIS REID was married to the Reverend JOHN ROSS, minister of Udny. She died in 1798. In this connexion, Dr REID was no less fortunate than in the former; and to Mr ROSS I am indebted for favours of the same kind with those which I have already acknowledged from Mr LESLIE.

The widow of Mr LEWIS REID died in 1798, in the eighty-seventh year of her age; having survived her step-son Dr REID, more than a year.

The limits within which I was obliged to confine my biographical details, prevented me from availing myself of many interesting circumstances which were communicated to me through the authentic channels which I have now mentioned. But I cannot omit this opportunity of returning to my different correspondents, my warmest acknowledgments for the pleasure and instruction which I received from their letters.

Mr

Mr JARDINE, alſo, the learned Profeſſor of Logic in the Univerſity of Glaſgow, a gentleman, who, for many years, lived in habits of the moſt confidential intimacy with Dr REID and his family, is entitled to my beſt thanks for his obliging attention to various queries, which I took the liberty to propoſe to him, concerning the hiſtory of our common friend.

ESSAYS

ERRATUM.

P. xv. l. 8. for ARBUTHNOT read PITCAIRN

ESSAYS

ON THE

INTELLECTUAL POWERS

OF MAN.

Who hath put wiſdom in the inward parts? Job.

DEDICATION.

TO

Mr DUGALD STEWART,

LATELY PROFESSOR OF MATHEMATICS,
NOW PROFESSOR OF MORAL PHILOSOPHY,

AND

Dr JAMES GREGORY,

PROFESSOR OF THE THEORY OF PHYSIC,

IN THE UNIVERSITY OF EDINBURGH.

My Dear Friends,

I KNOW not to whom I can addreſs theſe Eſſays with more propriety than to You; not only on account of a friendſhip begun in early life on your part, though in old age on mine, and in one of you I may ſay hereditary; nor yet on account of that correſpondence in our literary purſuits and amuſements, which has always given me ſo great pleaſure; but becauſe, if theſe Eſſays have any merit, you have a conſiderable ſhare in it, having not only encouraged me to hope that they may be uſeful, but favoured me with your obſervations on every part of

them, both before they were ſent to preſs and while they were under it.

I have availed myſelf of your obſervations, ſo as to correct many faults that might otherwiſe have eſcaped me; and I have a very grateful ſenſe of your friendſhip, in giving this aid to one, who ſtood much in need of it; having no ſhame, but much pleaſure, in being inſtructed by thoſe who formerly were my pupils, as one of you was.

It would be ingratitude to a man whoſe memory I moſt highly reſpect, not to mention my obligations to the late Lord KAMES for the concern he was pleaſed to take in this Work. Having ſeen a ſmall part of it, he urged me to carry it on; took account of my progreſs from time to time; reviſed it more than once, as far as it was carried, before his death; and gave me his obſervations on it, both with reſpect to the matter and the expreſſion. On ſome points we differed in opinion, and debated them keenly, both in converſation and by many letters, without any abatement of his affection, or of his zeal for the Work's being carried on and publiſhed: For he had too much liberality of mind not to allow to others the ſame liberty in judging which he claimed to himſelf.

It is difficult to ſay whether that worthy man was more eminent in active life or in ſpeculation. Very rare, ſurely, have been the inſtances where

where the talents for both were united in ſo eminent a degree.

His genius and induſtry, in many different branches of literature, will, by his works, be known to poſterity: His private virtues, and public ſpirit, his aſſiduity, through a long and laborious life, in many honourable public offices with which he was intruſted, and his zeal to encourage and promote every thing that tended to the improvement of his country in laws, literature, commerce, manufactures and agriculture, are beſt known to his friends and cotemporaries.

The favourable opinion which He, and You my Friends, were pleaſed to expreſs of this Work, has been my chief encouragement to lay it before the Public; and perhaps, without that encouragement, it had never ſeen the light: For I have always found, that, without ſocial intercourſe, even a favourite ſpeculation languiſhes; and that we cannot help thinking the better of our own opinions when they are approved by thoſe whom we eſteem good judges.

You know that the ſubſtance of theſe Eſſays was delivered annually, for more than twenty years, in Lectures to a large body of the more advanced ſtudents in this Univerſity, and for ſeveral years before, in another Univerſity. Thoſe who heard me with attention, of whom I preſume there are ſome hundreds alive, will recogniſe the doctrine which they heard, ſome of

them thirty years ago, delivered to them more diffuſely, and with the repetitions and illuſtrations proper for ſuch audiences.

I am afraid, indeed, that the more intelligent reader, who is converſant in ſuch abſtract ſubjects, may think that there are repetitions ſtill left, which might be ſpared. Such, I hope, will conſider, that what to one reader is a ſuperfluous repetition, to the greater part, leſs converſant in ſuch ſubjects, may be very uſeful. If this apology be deemed inſufficient, and be thought to be the dictate of lazineſs, I claim ſome indulgence even for that lazineſs, at my period of life.

You who are in the prime of life, with the vigour which it inſpires, will, I hope, make more happy advances in this or in any other branch of ſcience to which your talents may be applied.

GLASGOW-COLLEGE,
June 1. 1785.

THO. REID.

PRE-

PREFACE.

HUMAN knowledge may be reduced to two general heads, according as it relates to body, or to mind; to things material, or to things intellectual.

The whole ſyſtem of bodies in the Univerſe, of which we know but a very ſmall part, may be called the Material World; the whole ſyſtem of minds, from the infinite Creator to the meaneſt creature endowed with thought, may be called the Intellectual World. Theſe are the two great kingdoms of nature that fall within our notice; and about the one, or the other, or things pertaining to them, every art, every ſcience, and every human thought is employed; nor can the boldeſt flight of imagination carry us beyond their limits.

Many things there are, indeed, regarding the nature and the ſtructure both of body and of mind, which our faculties cannot reach; many difficulties which the ableſt Philoſopher cannot

reſolve; but of other natures, if any other there be, we have no knowledge, no conception at all.

That every thing that exiſts muſt be either corporeal or incorporeal, is evident. But it is not ſo evident, that every thing that exiſts muſt either be corporeal, or endowed with thought. Whether there be in the Univerſe, beings, which are neither extended, ſolid and inert, like body, nor active and intelligent, like mind, ſeems to be beyond the reach of our knowledge. There appears to be a vaſt interval between body and mind, and whether there be any intermediate nature that connects them together, we know not.

We have no reaſon to aſcribe intelligence, or even ſenſation, to plants; yet there appears in them an active force and energy, which cannot be the reſult of any arrangement or combination of inert matter. The ſame thing may be ſaid of thoſe powers by which animals are nouriſhed and grow, by which matter gravitates, by which magnetical and electrical bodies attract and repel each other, and by which the parts of ſolid bodies cohere.

Some have conjectured, that the phenomena of the material world which require active force, are produced by the continual operation of intelligent beings: Others have conjectured, that there may be in the Univerſe, beings that

are

are active without intelligence, which, as a kind of incorporeal machinery, contrived by the Supreme Wiſdom, perform their deſtined taſk without any knowledge or intention. But, laying aſide conjecture, and all pretences to determine in things beyond our reach, we muſt reſt in this, that body and mind are the only kinds of being of which we can have any knowledge, or can form any conception. If there be other kinds, they are not diſcoverable by the faculties which God hath given us; and, with regard to us, are as if they were not.

As, therefore, all our knowledge is confined to body and mind, or things belonging to them, there are two great branches of philoſophy, one relating to body, the other to mind. The properties of body, and the laws that obtain in the material ſyſtem, are the objects of Natural Philoſophy, as that word is now uſed. The branch which treats of the nature and operations of minds has by ſome been called Pneumatology. And to the one or the other of theſe branches, the principles of all the ſciences belong.

What variety there may be of minds or thinking beings throughout this vaſt univerſe, we cannot pretend to ſay. We dwell in a little corner of God's dominion, disjoined from the reſt of it. The globe which we inhabit is but one of ſeven planets that encircle our ſun. What various orders of beings may inhabit the other ſix, their

their ſecondaries, and the comets belonging to our ſyſtem; and how many other ſuns may be encircled with like ſyſtems, are things altogether hid from us. Although human reaſon and induſtry have diſcovered with great accuracy the order and diſtances of the planets, and the laws of their motion, we have no means of correſponding with them. That they may be the habitation of animated beings is very probable; but of the nature, or powers of their inhabitants, we are perfectly ignorant. Every man is conſcious of a thinking principle or mind in himſelf, and we have ſufficient evidence of a like principle in other men. The actions of brute animals ſhow, that they have ſome thinking principle, though of a nature far inferior to the human mind. And every thing about us may convince us of the exiſtence of a Supreme Mind, the Maker and Governor of the Univerſe. Theſe are all the minds of which reaſon can give us any certain knowledge.

The mind of man is the nobleſt work of God which reaſon diſcovers to us, and therefore, on account of its dignity, deſerves our ſtudy. It muſt indeed be acknowledged, that although it is of all objects the neareſt to us, and ſeems the moſt within our reach, it is very difficult to attend to its operations, ſo as to form a diſtinct notion of them; and on that account there is no branch of knowledge in which the ingenious and ſpeculative

lative have fallen into ſo great errors, and even abſurdities. Theſe errors and abſurdities have given riſe to a general prejudice againſt all inquiries of this nature; and becauſe ingenious men have, for many ages, given different and contradictory accounts of the powers of the mind, it is concluded, that all ſpeculations concerning them are chimerical and viſionary.

But whatever effect this prejudice may have with ſuperficial thinkers, the judicious will not be apt to be carried away with it. About two hundred years ago, the opinions of men in natural philoſophy were as various, and as contradictory, as they are now concerning the powers of the mind. GALILEO, TORRICELLI, KEPLER, BACON, and NEWTON, had the ſame diſcouragement in their attempts to throw light upon the material ſyſtem, as we have with regard to the intellectaul. If they had been deterred by ſuch prejudices, we ſhould never have reaped the benefit of their diſcoveries, which do honour to human nature, and will make their names immortal. The motto which Lord BACON prefixed to ſome of his writings was worthy of his genius, *Inveniam viam aut faciam.*

There is a natural order in the progreſs of the ſciences, and good reaſons may be aſſigned why the philoſophy of body ſhould be *elder ſiſter* to that of mind, and of a quicker growth; but the laſt hath the principle of life no leſs than

than the firſt, and will grow up, though ſlowly, to maturity. The remains of ancient philoſophy upon this ſubject, are venerable ruins, carrying the marks of genius and induſtry, ſufficient to inflame, but not to ſatisfy, our curioſity. In later ages, DES CARTES was the firſt that pointed out the road we ought to take in thoſe dark regions. MALEBRANCHE, ARNAUD, LOCKE, BERKELEY, BUFFIER, HUTCHESON, BUTLER, HUME, PRICE, Lord KAMES, have laboured to make diſcoveries; nor have they laboured in vain. For, however different and contrary their concluſions are, however ſceptical ſome of them, they have all given new light, and cleared the way to thoſe who ſhall come after them.

We ought never to deſpair of human genius, but rather to hope, that, in time, it may produce a ſyſtem of the powers and operations of the human mind, no leſs certain than thoſe of optics or aſtronomy.

This is the more devoutly to be wiſhed, that a diſtinct knowledge of the powers of the mind would undoubtedly give great light to many other branches of ſcience. Mr HUME hath juſtly obſerved, that "all the ſciences have a relation to human nature; and, however wide any of them may ſeem to run from it, they ſtill return back by one paſſage or another. This is the centre and capitol of the ſciences,

" ences, which being once maſters of, we may " eaſily extend our conqueſts every where."

The faculties of our minds are the tools and engines we muſt uſe in every diſquiſition; and the better we underſtand their nature and force, the more ſucceſsfully we ſhall be able to apply them. Mr LOCKE gives this account of the occaſion of his entering upon his Eſſay concerning Human Underſtanding: " Five or ſix friends " (ſays he) meeting at my chamber, and diſ- " courſing on a ſubject very remote from this, " found themſelves quickly at a ſtand, by the " difficulties that roſe on every ſide. After we " had for a while puzzled ourſelves, without " coming any nearer to a reſolution of thoſe " doubts that perplexed us, it came into my " thoughts that we took a wrong courſe; and " that, before we ſet ourſelves upon inquiries " of that nature, it was neceſſary to examine " our own abilities, and ſee what objects our " underſtandings were fitted or not fitted to " deal with. This I propoſed to the company, " who all readily aſſented; and thereupon it " was agreed that this ſhould be our firſt In- " quiry." If this be commonly the cauſe of perplexity in thoſe diſquiſitions which have leaſt relation to the mind, it muſt be ſo much more in hoſe that have an immediate connexion with it.

The

The ſciences may be diſtinguiſhed into two claſſes, according as they pertain to the material or to the intellectual world. The various parts of Natural Philoſophy, the mechanical Arts, Chemiſtry, Medicine, and Agriculture, belong to the firſt; but, to the laſt, belong Grammar, Logic, Rhetoric, Natural Theology; Morals, Juriſprudence, Law, Politics, and the fine Arts. The knowledge of the human mind is the root from which theſe grow, and draw their nouriſhment. Whether therefore we conſider the dignity of this ſubject, or its ſubſerviency to ſcience in general, and to the nobleſt branches of ſcience in particular, it highly deſerves to be cultivated.

A very elegant writer, on the *Sublime and Beautiful*, concludes his account of the paſſions thus: "The variety of the paſſions is great, "and worthy, in every branch of that variety, "of the moſt diligent inveſtigation. The more "accurately we ſearch into the human mind, "the ſtronger traces we every where find of His "wiſdom who made it. If a diſcourſe on the "uſe of the parts of the body may be conſider-"ed as a hymn to the Creator; the uſe of the "paſſions, which are the organs of the mind, "cannot be barren of praiſe to him, nor unpro-"ductive to ourſelves of that noble and un-"common union of ſcience and admiration, "which a contemplation of the works of infi-

"nite

" nite Wiſdom alone can afford to a rational
" mind; whilſt referring to him whatever we
" find of right, or good, or fair, in ourſelves,
" diſcovering his ſtrength and wiſdom even in
" our own weakneſs and imperfection, honour-
" ing them where we diſcover them clearly,
" and adoring their profundity where we are
" loſt in our ſearch, we may be inquiſitive
" without impertinence, and elevated without
" pride; we may be admitted, if I may dare to
" ſay ſo, into the counſels of the Almighty, by
" a conſideration of his works. This elevation
" of the mind ought to be the principal end of
" all our ſtudies, which, if they do not in ſome
" meaſure effect, they are of very little ſervice
" to us."

CON-

ESSAYS

ON THE

INTELLECTUAL POWERS OF MAN.

ESSAY I.

PRELIMINARY.

CHAP. I.

Explication of Words.

THERE is no greater impediment to the advancement of knowledge than the ambiguity of words. To this chiefly it is owing that we find ſects and parties in moſt branches of ſcience; and diſputes, which are carried on from age to age, without being brought to an iſſue.

Sophiſtry has been more effectually excluded from mathematics and natural philoſophy than from other ſciences. In mathematics it had no

place from the beginning: Mathematicians having had the wiſdom to define accurately the terms they uſe, and to lay down, as axioms, the firſt principles on which their reaſoning is grounded. Accordingly we find no parties among mathematicians, and hardly any diſputes.

In natural philoſophy, there was no leſs ſophiſtry, no leſs diſpute and uncertainty, than in other ſciences, until, about a century and a half ago, this ſcience began to be built upon the foundation of clear definitions and ſelf-evident axioms. Since that time, the ſcience, as if watered with the dew of Heaven, hath grown apace; diſputes have ceaſed, truth hath prevailed, and the ſcience hath received greater increaſe in two centuries than in two thouſand years before.

It were to be wiſhed, that this method, which hath been ſo ſucceſsful in thoſe branches of ſcience, were attempted in others: For definitions and axioms are the foundations of all ſcience. But that definitions may not be ſought, where no definition can be given, nor logical definitions be attempted, where the ſubject does not admit of them, it may be proper to lay down ſome general principles concerning definition, for the ſake of thoſe who are leſs converſant in this branch of logic.

When one undertakes to explain any art or ſcience, he will have occaſion to uſe many words

that are common to all who uſe the ſome language, and ſome that are peculiar to that art or ſcience. Words of the laſt kind are called *terms of the art*, and ought to be diſtinctly explained, that their meaning may be underſtood.

A definition is nothing elſe but an explication of the meaning of a word, by words whoſe meaning is already known. Hence it is evident, that every word cannot be defined; for the definition muſt conſiſt of words; and there could be no definition, if there were not words previouſly underſtood without definition. Common words, therefore, ought to be uſed in their common acceptation; and, when they have different acceptations in common language, theſe, when it is neceſſary, ought to be diſtinguiſhed. But they require no definition. It is ſufficient to define words that are uncommon, or that are uſed in an uncommon meaning.

It may farther be obſerved, that there are many words, which, though they may need explication, cannot be logically defined. A logical definition, that is, a ſtrict and proper definition, muſt expreſs the kind of the thing defined, and the ſpecific difference, by which the ſpecies defined, is diſtinguiſhed from every other ſpecies belonging to that kind. It is natural to the mind of man to claſs things under various kinds, and again to ſubdivide every kind into its various ſpecies. A ſpecies may often be ſubdivided

into ſubordinate ſpecies, and then it is conſidered as a kind.

From what has been ſaid of logical definition, it is evident, that no word can be logically defined which does not denote a ſpecies; becauſe ſuch things only can have a ſpecific difference; and a ſpecific difference is eſſential to a logical definition. On this account there can be no logical definition of individual things, ſuch as London or Paris. Individuals are diſtinguiſhed either by proper names, or by accidental circumſtances of time or place; but they have no ſpecific difference; and therefore, though they may be known by proper names, or may be deſcribed by circumſtances or relations, they cannot be defined. It is no leſs evident, that the moſt general words cannot be logically defined, becauſe there is not a more general term, of which they are a ſpecies.

Nay, we cannot define every ſpecies of things, becauſe it happens ſometimes that we have not words to expreſs the ſpecific difference. Thus a ſcarlet colour is, no doubt, a ſpecies of colour; but how ſhall we expreſs the ſpecific difference by which ſcarlet is diſtinguiſhed from green or blue? The difference of them is immediately perceived by the eye; but we have not words to expreſs it. Theſe things we are taught by logic.

Without

Without having recourſe to the principles of logic, we may eaſily be ſatisfied that words cannot be defined, which ſignify things perfectly ſimple, and void of all compoſition. This obſervation, I think, was firſt made by DES CARTES, and afterwards more fully illuſtrated by LOCKE. And however obvious it appears to be, many inſtances may be given of great philoſophers who have perplexed and darkened the ſubjects they have treated, by not knowing, or not attending to it.

When men attempt to define things which cannot be defined, their definitions will always be either obſcure or falſe. It was one of the capital defects of ARISTOTLE's philoſophy, that he pretended to define the ſimpleſt things, which neither can be, nor need to be defined; ſuch as *time* and *motion*. Among modern philoſophers, I know none that has abuſed definition ſo much as WOLFIUS, the famous German philoſopher, who, in a work on the human mind, called *Pſychologia Empirica*, conſiſting of many hundred propoſitions, fortified by demonſtrations, with a proportional accompanyment of definitions, corollaries, and ſcholia, has given ſo many definitions of things, which cannot be defined, and ſo many demonſtrations of things ſelf-evident, that the greateſt part of the work conſiſts of tautology, and ringing changes upon words.

There is no ſubject in which there is more frequent occaſion to uſe words that cannot be logically defined, than in treating of the powers and operations of the mind. The ſimpleſt operations of our minds muſt all be expreſſed by words of this kind. No man can explain by a logical definition what it is to think, to apprehend, to believe, to will, to deſire. Every man who underſtands the language has ſome notion of the meaning of theſe words; and every man, who is capable of reflection, may, by attending to the operations of his own mind, which are ſignified by them, form a clear and diſtinct notion of them; but they cannot be logically defined.

Since therefore it is often impoſſible to define words which we muſt uſe on this ſubject, we muſt as much as poſſible uſe common words in their common acceptation, pointing out their various ſenſes where they are ambiguous; and when we are obliged to uſe words leſs common, we muſt endeavour to explain them as well as we can, without affecting to give logical definitions, when the nature of the thing does not admit of them.

The following obſervations on the meaning of certain words are intended to ſupply, as far as we can, the want of definitions, by preventing ambiguity or obſcurity in the uſe of them.

1. By the *mind* of a man, we underſtand that in him which thinks, remembers, reaſons, wills.

The

The eſſence both of body and of mind is unknown to us. We know certain properties of the firſt, and certain operations of the laſt, and by theſe only we can define or deſcribe them. We define body to be that which is extended, ſolid, moveable, diviſible. In like manner, we define mind to be that which thinks. We are conſcious that we think, and that we have a variety of thoughts of different kinds; ſuch as ſeeing, hearing, remembering, deliberating, reſolving, loving, hating, and many other kinds of thought, all which we are taught by nature to attribute to one internal principle; and this principle of thought we call the *mind* or *ſoul* of a man.

2. By the *operations* of the mind, we underſtand every mode of thinking of which we are conſcious.

It deſerves our notice, that the various modes of thinking have always, and in all languages, as far as we know, been called by the name of Operations of the mind, or by names of the ſame import. To body we aſcribe various properties, but not operations, properly ſo called; it is extended, diviſible, moveable, inert; it continues in any ſtate in which it is put; every change of its ſtate is the effect of ſome force impreſſed upon it, and is exactly proportional to the force impreſſed, and in the preciſe direction of that force. Theſe are the general properties of mat-

ter, and theſe are not operations; on the contrary, they all imply its being a dead inactive thing, which moves only as it is moved, and acts only by being acted upon.

But the mind is from its very nature a living and active being. Every thing we know of it implies life and active energy; and the reaſon why all its modes of thinking are called its operations, is, that in all, or in moſt of them, it is not merely paſſive as body is, but is really and properly active.

In all ages, and in all languages, ancient and modern, the various modes of thinking have been expreſſed by words of active ſignification, ſuch as ſeeing, hearing, reaſoning, willing, and the like. It ſeems therefore to be the natural judgment of mankind, that the mind is active in its various ways of thinking; and for this reaſon they are called its operations, and are expreſſed by active verbs.

It may be made a queſtion, What regard is to be paid to this natural judgment? may it not be a vulgar error? Philoſophers who think ſo, have, no doubt, a right to be heard. But until it is proved that the mind is not active in thinking, but merely paſſive, the common language with regard to its operations ought to be uſed, and ought not to give place to a phraſeology invented by Philoſophers, which implies its being merely paſſive.

3. The

3. The words *power* and *faculty*, which are often uſed in ſpeaking of the mind, need little explication. Every operation ſuppoſes a power in the being that operates; for, to ſuppoſe any thing to operate, which has no power to operate, is manifeſtly abſurd. But, on the other hand, there is no abſurdity in ſuppoſing a being to have power to operate, when it does not operate. Thus, I may have power to walk, when I ſit; or to ſpeak, when I am ſilent. Every operation therefore implies power; but the power does not imply the operation.

The *faculties* of the mind, and its *powers*, are often uſed as ſynonymous expreſſions. But as moſt ſynonymes have ſome minute diſtinction that deſerves notice, I apprehend that the word *faculty* is moſt properly applied to thoſe powers of the mind which are original and natural, and which make a part of the conſtitution of the mind. There are other powers which are acquired by uſe, exerciſe or ſtudy, which are not called faculties, but *habits*. There muſt be ſomething in the conſtitution of the mind neceſſary to our being able to acquire habits, and this is commonly called *capacity*.

4. We frequently meet with a diſtinction in writers upon this ſubject, between things *in the mind*, and things *external* to the mind. The powers, faculties, and operations of the mind, are things in the mind. Every thing is ſaid to be

be in the mind, of which the mind is the *ſubject*. It is ſelf-evident, that there are ſome things which cannot exiſt without a ſubject to which they belong, and of which they are attributes. Thus, colour muſt be in ſomething coloured; figure in ſomething figured; thought can only be in ſomething that thinks; wiſdom and virtue cannot exiſt but in ſome being that is wiſe and virtuous. When therefore we ſpeak of things in the mind, we underſtand by this, things of which the mind is the ſubject. Excepting the mind itſelf, and things in the mind, all other things are ſaid to be external. It ought therefore to be remembered, that this diſtinction between things in the mind, and things external, is not meant to ſignify the place of the things we ſpeak of, but their ſubject.

There is a figurative ſenſe in which things are ſaid to be in the mind, which it is ſufficient barely to mention. We ſay, ſuch a thing was not in my mind, meaning no more than that I had not the leaſt thought of it. By a figure, we put the thing for the thought of it. In this ſenſe, external things are in the mind as often as they are the objects of our thought.

5. *Thinking* is a very general word, which includes all the operations of our minds, and is ſo well underſtood as to need no definition.

To *perceive*, to *remember*, to be *conſcious*, and to *conceive* or *imagine*, are words common to Philoſophers,

Philoſophers, and to the vulgar. They ſignify different operations of the mind, which are diſtinguiſhed in all languages, and by all men that think. I ſhall endeavour to uſe them in their moſt common and proper acceptation, and I think they are hardly capable of ſtrict definition. But as ſome Philoſophers, in treating of the mind, have taken the liberty to uſe them very improperly, ſo as to corrupt the Engliſh language, and to confound things, which the common underſtanding of mankind hath always led them to diſtinguiſh, I ſhall make ſome obſervations on the meaning of them, that may prevent ambiguity or confuſion in the uſe of them.

6. *Firſt*, We are never ſaid to *perceive* things, of the exiſtence of which we have not a full conviction. I may *conceive* or *imagine* a mountain of gold, or a winged horſe; but no man ſays that he perceives ſuch a creature of imagination. Thus *perception* is diſtinguiſhed from *conception* or imagination. *Secondly*, Perception is applied only to external objects, not to thoſe that are in the mind itſelf. When I am pained, I do not ſay that I perceive pain, but that I feel it, or that I am conſcious of it. Thus *perception* is diſtinguiſhed from *conſciouſneſs*. *Thirdly*, The immediate object of perception muſt be ſomething preſent, and not what is paſt. We may remember what is paſt, but do not perceive it.

it. I may ſay, I perceive ſuch a perſon has had the ſmall-pox; but this phraſe is figurative, although the figure is ſo familiar that it is not obſerved. The meaning of it is, that I perceive the pits in his face, which are certain ſigns of his having had the ſmall-pox. We ſay we perceive the thing ſignified, when we only perceive the ſign. But when the word *perception* is uſed properly, and without any figure, it is never applied to things paſt. And thus it is diſtinguiſhed from *remembrance*.

In a word, perception is moſt properly applied to the evidence which we have of external objects by our ſenſes. But as this is a very clear and cogent kind of evidence, the word is often applied by analogy to the evidence of reaſon or of teſtimony, when it is clear and cogent. The perception of external objects by our ſenſes, is an operation of the mind of a peculiar nature, and ought to have a name appropriated to it. It has ſo in all languages. And, in the Engliſh, I know no word more proper to expreſs this act of the mind than perception. Seeing, hearing, ſmelling, taſting, and touching or feeling, are words that expreſs the operations proper to each ſenſe; perceiving expreſſes that which is common to them all.

The obſervations made on this word would have been unneceſſary, if it had not been ſo much abuſed in philoſophical writings upon the mind;

mind; for, in other writings, it has no obſcurity. Although this abuſe is not chargeable on Mr HUME only, yet I think he has carried it to the higheſt pitch. The firſt ſentence of his Treatiſe of Human Nature runs thus: "All "the perceptions of the human mind reſolve "themſelves into two diſtinct heads, which I "ſhall call impreſſions and ideas." He adds a little after, that, under the name of impreſſions, he comprehends all our ſenſations, paſſions, and emotions. Here we learn, that our paſſions and emotions are perceptions. I believe, no Engliſh writer before him ever gave the name of a perception to any paſſion or emotion. When a man is angry, we muſt ſay that he has the perception of anger. When he is in love, that he has the perception of love. He ſpeaks often of the perceptions of memory, and of the perceptions of imagination; and he might as well ſpeak of the hearing of ſight, or of the ſmelling of touch: For, ſurely, hearing is not more different from ſight, or ſmelling from touch, than perceiving is from remembering or imagining.

7. *Conſciouſneſs* is a word uſed by Philoſophers, to ſignify that immediate knowledge which we have of our preſents thoughts and purpoſes, and, in general, of all the preſent operations of our minds. Whence we may obſerve, that conſciouſneſs is only of things preſent. To apply conſciouſneſs to things paſt, which ſometimes

times is done in popular diſcourſe, is to confound conſciouſneſs with memory; and all ſuch confuſion of words ought to be avoided in philoſophical diſcourſe. It is likewiſe to be obſerved, that conſciouſneſs is only of things in the mind, and not of external things. It is improper to ſay, I am conſcious of the table which is before me. I perceive it, I ſee it, but do not ſay I am conſcious of it. As that conſciouſneſs by which we have a knowledge of the operations of our own minds, is a different power from that by which we perceive external objects, and as theſe different powers have different names in our language, and, I believe, in all languages, a Philoſopher ought carefully to preſerve this diſtinction, and never to confound things ſo different in their nature.

8. *Conceiving*, *imagining*, and *apprehending*, are commonly uſed as ſynonymous in our language, and ſignify the ſame thing which the Logicians call *ſimple apprehenſion*. This is an operation of the mind different from all thoſe we have mentioned. Whatever we perceive, whatever we remember, whatever we are conſcious of, we have a full perſuaſion or conviction of its exiſtence. But we may conceive or imagine what has no exiſtence, and what we firmly believe to have no exiſtence. What never had an exiſtence cannot be remembered; what has no exiſtence *at preſent* cannot be the object of perception

ception or of conſciouſneſs; but what never had, nor has any exiſtence, may be conceived. Every man knows, that it is as eaſy to conceive a winged horſe or a centaur, as it is to conceive a horſe or a man. Let it be obſerved therefore, that to *conceive*, to *imagine*, to *apprehend*, when taken in the proper ſenſe, ſignify an act of the mind which implies no belief or judgment at all. It is an act of the mind by which nothing is affirmed or denied, and which therefore can neither be true nor falſe.

But there is another and a very different meaning of thoſe words, ſo common and ſo well authoriſed in language, that it cannot eaſily be avoided; and on that account we ought to be the more on our guard, that we be not miſled by the ambiguity. Politeneſs and good-breeding lead men, on moſt occaſions, to expreſs their opinions with modeſty, eſpecially when they differ from others whom they ought to reſpect. Therefore, when we would expreſs our opinion modeſtly, inſtead of ſaying, "This is my opinion," or, "this is my judgment," which has the air of dogmaticalneſs, we ſay, "I conceive it to be thus, I imagine or apprehend it to be thus;" which is underſtood as a modeſt declaration of our judgment. In like manner, when any thing is ſaid which we take to be impoſſible, we ſay, "We cannot conceive it," meaning, that we cannot believe it.

Thus

Thus we ſee, that the words *conceive, imagine, apprehend*, have two meanings, and are uſed to expreſs two operations of the mind, which ought never to be confounded. Sometimes they expreſs ſimple apprehenſion, which implies no judgment at all; ſometimes they expreſs judgment or opinion. This ambiguity ought to be attended to, that we may not impoſe upon ourſelves or others in the uſe of them. The ambiguity is indeed remedied in a great meaſure by their conſtruction. When they are uſed to expreſs ſimple apprehenſion, they are followed by a noun in the *accuſative caſe*, which ſignifies the object conceived. But when they are uſed to expreſs opinion or judgment, they are commonly followed by a verb in the *infinitive mood*. "I "conceive an Egyptian pyramid. This implies no judgment. "I conceive the Egyptian py- "ramids to be the moſt ancient monuments of "human art." This implies judgment. When the words are uſed in the laſt ſenſe, the thing conceived muſt be a propoſition, becauſe judgment cannot be expreſſed but by a propoſition. When they are uſed in the firſt ſenſe, the thing conceived may be no propoſition, but a ſimple term only, as a pyramid, an obeliſk. Yet it may be obſerved, that even a propoſition may be ſimply apprehended without forming any judgment of its truth or falſehood: For it is one thing to conceive the meaning of a propoſition;

tion; it is another thing to judge it to be true or falſe.

Although the diſtinction between ſimple apprehenſion, and every degree of aſſent or judgment, be perfectly evident to every man who reflects attentively on what paſſes in his own mind; although it is very neceſſary, in treating of the powers of the mind, to attend carefully to this diſtinction; yet, in the affairs of common life, it is ſeldom neceſſary to obſerve it accurately. On this account we ſhall find, in all common languages, the words which expreſs one of thoſe operations frequently applied to the other. To think, to ſuppoſe, to imagine, to conceive, to apprehend, are the words we uſe to expreſs ſimple apprehenſion; but they are all frequently uſed to expreſs judgment. Their ambiguity ſeldom occaſions any inconvenience in the common affairs of life, for which language is framed. But it has perplexed Philoſophers, in treating of the operations of the mind, and will always perplex them, if they do not attend accurately to the different meanings which are put upon thoſe words on different occaſions.

9. Moſt of the operations of the mind, from their very nature, muſt have *objects* to which they are directed, and about which they are employed. He that perceives, muſt perceive ſomething; and that which he perceives is called the object of his perception. To perceive,

without having any object of perception, is impoſſible. The mind that perceives, the object perceived, and the operation of perceiving that object, are diſtinct things, and are diſtinguiſhed in the ſtructure of all languages. In this ſentence, "I ſee, or perceive the moon;" *I* is the perſon or *mind;* the active verb *ſee* denotes the operation of that mind; and the *moon* denotes the object. What we have ſaid of perceiving, is equally applicable to moſt operations of the mind. Such operations are, in all languages, expreſſed by active tranſitive verbs: And we know, that, in all languages, ſuch verbs require a thing or perſon, which is the agent, and a noun following in an oblique caſe, which is the object. Whence it is evident, that all mankind, both thoſe who have contrived language, and thoſe who uſe it with underſtanding, have diſtinguiſhed theſe three things as different, to wit, the operations of the mind, which are expreſſed by active verbs, the mind itſelf, which is the nominative to thoſe verbs, and the object, which is, in the oblique caſe, governed by them.

It would have been unneceſſary to explain ſo obvious a diſtinction, if ſome ſyſtems of philoſophy had not confounded it. Mr HUME's ſyſtem, in particular, confounds all diſtinction between the operations of the mind and their objects. When he ſpeaks of the ideas of memory,

ty, the ideas of imagination, and the ideas of ſenſe, it is often impoſſible, from the tenor of his diſcourſe, to know whether, by thoſe ideas, he means the operations of the mind, or the objects about which they are employed. And indeed, according to his ſyſtem, there is no diſtinction between the one and the other.

A philoſopher is, no doubt, entitled to examine even thoſe diſtinctions that are to be found in the ſtructure of all languages; and, if he is able to ſhew that there is no foundation for them in the nature of the things diſtinguiſhed; if he can point out ſome prejudice common to mankind which has led them to diſtinguiſh things that are not really different; in that caſe, ſuch a diſtinction may be imputed to a vulgar error, which ought to be corrected in philoſophy. But when, in the firſt ſetting out, he takes it for granted, without proof, that diſtinctions found in the ſtructure of all languages, have no foundation in nature; this ſurely is too faſtidious a way of treating the common ſenſe of mankind. When we come to be inſtructed by Philoſophers, we muſt bring the old light of common ſenſe along with us, and by it judge of the new light which the Philoſopher communicates to us. But when we are required to put out the old light altogether, that we may follow the new, we have reaſon to be on our guard. There may be diſtinctions that have a

[illegible] foundation, and which may be neceſſary in philoſophy, which are not made in common language, becauſe not neceſſary in the common affairs of life. But I believe no inſtance will be found of a diſtinction made in all languages, which has not a juſt foundation in nature.

10. The word *idea* occurs ſo frequently in modern philoſophical writings upon the mind, and is ſo ambiguous in its meaning, that it is neceſſary to make ſome obſervations upon it. There are chiefly two meanings of this word in modern authors, a popular and a philoſophical.

Firſt, In popular language, *idea* ſignifies the ſame thing as conception, apprehenſion, notion. To have an idea of any thing, is to conceive it. To have a diſtinct idea, is to conceive it diſtinctly. To have no idea of it, is not to conceive it all. It was before obſerved, that conceiving or apprehending has always been conſidered by all men as an act or operation of the mind, and on that account has been expreſſed in all languages by an active verb. When, therefore, we uſe the phraſe of having ideas, in the popular ſenſe, we ought to attend to this, that it ſignifies preciſely the ſame thing which we commonly expreſs by the active verbs conceiving or apprehending.

When the word idea is taken in this popular ſenſe, no man can poſſibly doubt whether he has

has ideas. For he that doubts muſt think, and to think is to have ideas.

Sometimes, in popular language, a man's ideas ſignify his opinions. The ideas of ARISTOTLE, or of EPICURUS, ſignify the opinions of theſe Philoſophers. What was formerly ſaid of the words *imagine*, *conceive*, *apprehend*, that they are ſometimes uſed to expreſs judgment, is no leſs true of the word idea. This ſignification of the word ſeems indeed more common in the French language than in Engliſh. But it is found in this ſenſe in good Engliſh authors, and even in Mr LOCKE. Thus we ſee, that having *ideas*, taken in the popular ſenſe, has preciſely the ſame meaning with conceiving, imagining, apprehending, and has likewiſe the ſame ambiguity. It may, therefore, be doubted, whether the introduction of this word into popular diſcourſe, to ſignify the operation of conceiving or apprehending, was at all neceſſary. For, *firſt*, We have, as has been ſhown, ſeveral words which are either originally Engliſh, or have been long naturalized, that expreſs the ſame thing; why therefore ſhould we adopt a Greek word in place of theſe, any more than a French or a German word? Beſides, the words of our own language are leſs ambiguous. For the word idea has, for many ages, been uſed by Philoſophers as a term of art; and in the dif-

ferent ſyſtems of Philoſophers means very different things.

Secondly, According to the philoſophical meaning of the word idea, it does not ſignify that act of the mind which we call thought or conception, but ſome object of thought. Ideas, according to Mr LOCKE, (whoſe very frequent uſe of this word has probably been the occaſion of its being adopted into common language), "are nothing but the immediate objects of the mind in thinking." But of thoſe objects of thought called Ideas, different ſects of Philoſophers have given a very different account BRUCKERUS, a learned German, wrote a whole book giving the hiſtory of ideas.

The moſt ancient ſyſtem we have concerning ideas, is that which is explained in ſeveral dialogues of PLATO, and which many ancient, as well as modern writers, have aſcribed to PLATO as the inventor. But it is certain that PLATO had his doctrine upon this ſubject, as well as the name *idea*, from the ſchool of PYTHAGORAS. We have ſtill extant a tract of TIMÆUS the Locrian, a Pythagorean Philoſopher, concerning the ſoul of the world, in which we find the ſubſtance of PLATO's doctrine concerning ideas. They were held to be eternal, uncreated, and immutable forms or models, according to which the Deity, of an eternal matter, made every ſpecies of things that exiſts. Thoſe Philoſophers held,

held, that there are three firſt principles of all things. *Firſt*, An eternal matter, of which all things were made: *Secondly*, Eternal and immaterial forms or ideas, according to which they were made: And, *thirdly*, An efficient cauſe, the Deity, who made them. The mind of man, in order to its being fitted for the contemplation of theſe eternal ideas, muſt undergo a certain purification, and be weaned from ſenſible things. The eternal ideas are the only object of ſcience; becauſe, the objects of ſenſe being in a perpetual flux, there can be no real knowledge with regard to them.

The Philoſophers of the Alexandrian ſchool, commonly called *the latter Platoniſts*, made ſome change upon the ſyſtem of the ancient Platoniſts with reſpect to the eternal ideas. They held them not to be a principle diſtinct from the Deity, but to be the conceptions of things in the divine underſtanding, the natures and eſſences of all things being perfectly known to him from eternity.

It ought to be obſerved, that the Pythagoreans, and the Platoniſts whether elder or latter, made the eternal ideas to be objects of ſcience only, and of abſtract contemplation, not the objects of ſenſe. And in this the ancient ſyſtem of eternal ideas differs from the modern one of Father MALEBRANCHE. He held in common with other modern Philoſophers, that no external

thing is perceived by us immediately, but only by ideas: But he thought, that the ideas, by which we perceive an external world, are the ideas of the Deity himſelf, in whoſe mind the ideas of all things, paſt, preſent, and future, muſt have been from eternity; for the Deity being intimately preſent to our minds at all times, may diſcover to us as much of his ideas as he ſees proper, according to certain eſtabliſhed laws of nature: And in his ideas, as in a mirror, we perceive whatever we do perceive of the external world.

Thus we have three ſyſtems, which maintain, that the ideas, which are the immediate objects of human knowledge, are eternal and immutable, and exiſted before the things which they repreſent. There are other ſyſtems, according to which, the ideas, which are the immediate objects of all our thoughts, are poſterior to the things which they repreſent, and derived from them. We ſhall give ſome account of theſe; but as they have gradually ſprung out of the ancient Peripatetic ſyſtem, it is neceſſary to begin with ſome account of it.

ARISTOTLE taught, that all the objects of our thought enter at firſt by the ſenſes; and, ſince the ſenſe cannot receive external material objects themſelves, it receives their ſpecies; that is, their images or forms, without the matter; as wax receives the form of the ſeal, without any

any of the matter of it. Theſe images or forms, impreſſed upon the ſenſes, are called *ſenſible ſpecies*, and are the objects only of the ſenſitive part of the mind: But, by various internal powers, they are retained, refined, and ſpiritualized, ſo as to become objects of memory and imagination, and, at laſt, of pure intellection. When they are objects of memory and of imagination, they get the name of *phantaſms*: When, by farther refinement, and being ſtripped of their particularities, they become objects of ſcience; they are called *intelligible ſpecies*: So that every immediate object, whether of ſenſe, of memory, of imagination, or of reaſoning, muſt be ſome phantaſm or ſpecies in the mind itſelf.

The followers of ARISTOTLE, eſpecially the ſchoolmen, made great additions to this theory, which the Author himſelf mentions very briefly, and with an appearance of reſerve. They entered into large diſquiſitions with regard to the ſenſible ſpecies, what kind of things they are; how they are ſent forth by the object, and enter by the organs of the ſenſes; how they are preſerved and refined by various agents, called internal ſenſes; concerning the number and offices of which they had many controverſies. But we ſhall not enter into a detail of theſe matters.

The reaſon of giving this brief account of the theory of the Peripatetics, with regard to the immediate

immediate objects of our thoughts, is, becauſe the doctrine of modern Philoſophers concerning ideas is built upon it. Mr LOCKE, who uſes this word ſo very frequently, tells us, that he means the ſame thing by it, as is commonly meant by *ſpecies* or *phantaſm*. GASSENDI, from whom LOCKE borrowed more than from any other author, ſays the ſame. The words *ſpecies* and *phantaſm*, are terms of art in the Peripatetic ſyſtem, and the meaning of them is to be learned from it.

The theory of DEMOCRITUS and EPICURUS, on this ſubject, was not very unlike to that of the Peripatetics. They held, that all bodies continually ſend forth ſlender films or ſpectres from their ſurface, of ſuch extreme ſubtilty, that they eaſily penetrate our groſs bodies, or enter by the organs of ſenſe, and ſtamp their image upon the mind. The ſenſible ſpecies of ARISTOTLE was mere forms without matter. The ſpectres of EPICURUS were compoſed of a very ſubtile matter.

Modern Philoſophers, as well as the Peripatetics and Epicureans of old, have conceived, that external objects cannot be the immediate objects of our thought; that there muſt be ſome image of them in the mind itſelf, in which, as in a mirror, they are ſeen. And the name *idea*, in the philoſophical ſenſe of it, is given to thoſe internal and immediate objects of our thoughts.

The external thing is the remote or mediate object; but the idea, or image of that object in the mind, is the immediate object, without which we could have no perception, no remembrance, no conception of the mediate object.

When, therefore, in common language, we ſpeak of having an idea of any thing, we mean no more by that expreſſion, but thinking of it. The vulgar allow, that this expreſſion implies a mind that thinks; an act of that mind which we call thinking, and an object about which we think. But, beſides theſe three, the Philoſopher conceives that there is a fourth, to wit, the *idea*, which is the immediate object. The idea is in the mind itſelf, and can have no exiſtence but in a mind that thinks; but the remote or mediate object may be ſomething external, as the ſun or moon; it may be ſomething paſt or future; it may be ſomething which never exiſted. This is the philoſophical meaning of the word *idea;* and we may obſerve, that this meaning of that word is built upon a philoſophical opinion: For, if Philoſophers had not believed that there are ſuch immediate objects of all our thoughts in the mind, they would never have uſed the word idea to expreſs them.

I ſhall only add on this article, that, although I may have occaſion to uſe the word idea in this philoſophical ſenſe in explaining the opinions of others, I ſhall have no occaſion to uſe it

it in expreſſing my own, becauſe I believe *ideas*, taken in this ſenſe, to be a mere fiction of Philoſophers. And, in the popular meaning of the word, there is the leſs occaſion to uſe it, becauſe the Engliſh words, *thought*, *notion*, *apprehenſion*, anſwer the purpoſe as well as the Greek word *idea*; with this advantage, that they are leſs ambiguous. There is, indeed, a meaning of the word idea, which I think moſt agreeable to its uſe in ancient philoſophy, and which I would willingly adopt, if uſe, the arbiter of language, did permit. But this will come to be explained afterwards.

II. The word *impreſſion* is uſed by Mr HUME, in ſpeaking of the operations of the mind, almoſt in the ſame ſenſe as the word *idea* is by Mr LOCKE. What the latter calls ideas, the former divides into two ſpecies; one of which he calls impreſſions, the other ideas. I ſhall make ſome obſervations upon Mr HUME's explication of *that* word, and then conſider the proper meaning of it in the Engliſh language.

"We may divide, (ſays Mr HUME, Eſſays, vol. 2. page 18.), all the perceptions of the "human mind into two claſſes or ſpecies, which "are diſtinguiſhed by their different degrees of "force and vivacity. The leſs lively and forcible are commonly denominated thoughts or "ideas. The other ſpecies want a name in our "language, and in moſt others; let us therefore

"uſe

" uſe a little freedom, and call them impreſſions.
" By the term *impreſſions*, then, I mean all our
" more lively perceptions, when we hear, or ſee,
" or feel, or love, or hate, or deſire, or will.
" Ideas are the leſs lively perceptions, of which
" we are conſcious, when we reflect on any of
" thoſe ſenſations or movements above mention-
" ed."

This is the explication Mr HUME hath given in his Eſſays of the term *impreſſions*, when applied to the mind; and his explication of it, in his Treatiſe of Human Nature, is to the ſame purpoſe.

Diſputes about words belong rather to Grammarians than to Philoſophers; but Philoſophers ought not to eſcape cenſure when they corrupt a language, by uſing words in a way which the purity of the language will not admit. I find fault with Mr HUME's phraſeology in the words I have quoted,

Firſt, Becauſe he gives the name of perceptions to every operation of the mind. Love is a perception, hatred a perception. Deſire is a perception, will is a perception; and, by the ſame rule, a doubt, a queſtion, a command, is a perception. This is an intolerable abuſe of language, which no Philoſopher has authority to introduce.

Secondly, When Mr HUME ſays, *that we may divide all the perceptions of the human mind into two*

two claſſes or ſpecies, which are diſtinguiſhed by their degrees of force and vivacity, the manner of expreſſion is looſe and unphiloſophical. To differ in ſpecies is one thing; to differ in degree is another. Things which differ in degree only muſt be of the ſame ſpecies. It is a maxim of common ſenſe, admitted by all men, that *greater* and *leſs* do not make a change of ſpecies. The ſame man may differ in the degree of his force and vivacity, in the morning and at night; in health and in ſickneſs: But this is ſo far from making him a different ſpecies, that it does not ſo much as make him a different individual. To ſay, therefore, that two different claſſes, or ſpecies of perceptions, are diſtinguiſhed by the degrees of their force and vivacity, is to confound a difference of *degree* with a difference of *ſpecies*, which every man of underſtanding knows how to diſtinguiſh.

Thirdly, We may obſerve, that this Author, having given the general name of perception to all the operations of the mind, and diſtinguiſhed them into two claſſes or ſpecies, which differ only in degree of force and vivacity, tells us, that he gives the name of impreſſions to all our more lively perceptions; to wit, when we hear, or ſee, or feel, or love, or hate, or deſire, or will. There is great confuſion in this account of the meaning of the word *impreſſion*. When I ſee, this is an *impreſſion*. But why has not the Author

thor told us, whether he gives the name of *impreſſion* to the object ſeen, or to that act of my mind by which I ſee it? When I ſee the full moon, the full moon is one thing, my perceiving it is another thing. Which of theſe two things does he call an impreſſion? We are left to gueſs this; nor does all that this Author writes about impreſſions clear this point. Every thing he ſays tends to darken it, and to lead us to think, that the full moon which I ſee, and my ſeeing it, are not two things, but one and the ſame thing.

The ſame obſervation may be applied to every other inſtance the Author gives to illuſtrate the meaning of the word *impreſſion*. "When we "hear, when we feel, when we love, when we "hate, when we deſire, when we will." In all theſe acts of the mind there muſt be an *object*, which is heard, or felt, or loved, or hated, or deſired, or willed. Thus, for inſtance, I love my country. This, ſays Mr HUME, is an *impreſſion*. But what is the *impreſſion?* Is it my country, or is it the affection I bear to it? I aſk the Philoſopher this queſtion; but I find no anſwer to it. And when I read all that he has *written* on this ſubject, I find this word *impreſſion* ſometimes uſed to ſignify an operation of the mind, ſometimes the object of the operation; but, for the moſt part, it is a vague and indetermined word that ſignifies both.

know not whether it may be conſidered as an apology for ſuch abuſe of words, in an Author who underſtood the language ſo well, and uſed it with ſo great propriety in writing on other ſubjects, that Mr HUME's ſyſtem, with regard to the mind, required a language of a different ſtructure from the common; or, if expreſſed in plain Engliſh, would have been too ſhocking to the common ſenſe of mankind. To give an inſtance or two of this. If a man receives a preſent on which he puts a high value; if he ſee and handle it, and put it in his pocket, this, ſays Mr HUME, is an *impreſſion*. If the man only dream that he received ſuch a preſent, this is an *idea*. Wherein lies the difference between this impreſſion and this idea; between the dream and the reality? They are different claſſes or ſpecies ſays Mr HUME: ſo far all men will agree with him. But he adds, that they are diſtinguiſhed only by different degrees of force and vivacity. Here he inſinuates a tenet of his own, in contradiction to the common ſenſe of mankind. Common ſenſe convinces every man, that a lively dream is no nearer to a reality than a faint one; and that if a man ſhould dream that he had all the wealth of Cræſus, it would not put one farthing in his pocket. It is impoſſible to fabricate arguments againſt ſuch undeniable principles, without confounding the meaning of words.

In

In like manner, if a man would perſuade me, that the moon which I ſee, and my ſeeing it, are not two things, but one and the ſame thing, he will anſwer his purpoſe leſs by arguing this point in plain Engliſh, than by confounding the two under one name, ſuch as that of an *impreſſion*: For ſuch is the power of words, that if we can be brought to the habit of calling two things that are connected, *by the ſame name*, we are the more eaſily led to believe them to be one and the ſame thing.

Let us next conſider the proper meaning of the word *impreſſion* in Engliſh, that we may ſee how far it is fit to expreſs either the operations of the mind, or their objects.

When a figure is ſtamped upon a body by preſſure, that figure is called an *impreſſion*, as the impreſſion of a ſeal on wax, of printing-types, or of a copperplate, on paper. This ſeems now to be the literal ſenſe of the word; the effect borrowing its name from the cauſe. But by metaphor or analogy, like moſt other words, its meaning is extended, ſo as to ſignify any change produced in a body by the operation of ſome external cauſe. A blow of the hand makes no impreſſion on a ſtone-wall; but a battery of cannon may. The moon raiſes a tide in the ocean, but makes no impreſſion on rivers and lakes.

When we ſpeak of making an impreſſion on the mind, the word is carried ſtill farther from

its literal meaning; uſe, however, which is the arbiter of language, authoriſes this application of it. As when we ſay that admonition and reproof make little impreſſion on thoſe who are confirmed in bad habits. The ſame diſcourſe delivered in one way, makes a ſtrong impreſſion on the hearers; delivered in another way, it makes no impreſſion at all.

It may be obſerved, that in ſuch examples, an impreſſion made on the mind always implies ſome change of purpoſe or will; ſome new habit produced, or ſome former habit weakened; ſome paſſion raiſed or allayed. When ſuch changes are produced by perſuaſion, example, or any external cauſe, we ſay that ſuch cauſes make an impreſſion upon the mind. But when things are ſeen or heard, or apprehended, without producing any paſſion or emotion, we ſay that they make no impreſſion.

In the moſt extenſive ſenſe, an impreſſion is a change produced in ſome paſſive ſubject by the operation of an external cauſe. If we ſuppoſe an active being to produce any change in itſelf by its own active power, this is never called an impreſſion. It is the act or operation of the being itſelf, not an impreſſion upon it. From this it appears, that to give the name of an impreſſion to any effect produced in the mind, is to ſuppoſe that the mind does not act at all in the production of that effect. If ſeeing, hearing,

ing, deſiring, willing, be operations of the mind, they cannot be impreſſions. If they be impreſſions, they cannot be operations of the mind. In the ſtructure of all languages, they are conſidered as acts or operations of the mind itſelf, and the names given them imply this. To call them impreſſions, therefore, is to treſpaſs againſt the ſtructure, not of a particular language only, but of all languages.

If the word *impreſſion* be an improper word to ſignify the operations of the mind, it is at leaſt as improper to ſignify their objects; for would any man be thought to ſpeak with propriety, who ſhould ſay that the ſun is an impreſſion, that the earth and the ſea are impreſſions?

It is commonly believed, and taken for granted, that every language, if it be ſufficiently copious in words, is equally fit to expreſs all opinions, whether they be true or falſe. I apprehend, however, that there is an exception to this general rule, which deſerves our notice. There are certain common opinions of mankind, upon which the ſtructure and grammar of all languages are founded. While theſe opinions are common to all men, there will be a great ſimilarity in all languages that are to be found on the face of the earth. Such a ſimilarity there really is; for we find in all languages the ſame parts of ſpeech, the diſtinction of nouns and verbs, the diſtinction of nouns into adjective and

ſubſtantive, of verbs into active and paſſive. In verbs we find like tenſes, moods, perſons and numbers. There are general rules of grammar, the ſame in all languages. This ſimilarity of ſtructure in all languages ſhews an uniformity among men in thoſe opinions upon which the ſtructure of language is founded.

If, for inſtance, we ſhould ſuppoſe that there was a nation who believed that the things which we call attributes might exiſt without a ſubject, there would be in their language no diſtinction between adjectives and ſubſtantives, nor would it be a rule with them that an adjective has no meaning, unleſs when joined to a ſubſtantive. If there was any nation who did not diſtinguiſh between acting and being acted upon, there would in their language be no diſtinction between active and paſſive verbs, nor would it be a rule that the active verb muſt have an agent in the nominative caſe; but that, in the paſſive verb, the agent muſt be in an oblique caſe.

The ſtructure of all languages is grounded upon common notions, which Mr HUME's philoſophy oppoſes, and endeavours to overturn. This no doubt led him to warp the common language into a conformity with his principles; but we ought not to imitate him in this, until we are ſatisfied that his principles are built on a ſolid foundation.

12. Sen-

12. Senſation is a name given by Philoſophers to an act of mind, which may be diſtinguiſhed from all others by this, that it hath no object diſtinct from the act itſelf. Pain of every kind is an uneaſy ſenſation. When I am pained, I cannot ſay, that the pain I feel is one thing, and that my feeling it, is another thing. They are one and the ſame thing, and cannot be diſjoined, even in imagination. Pain, when it is not felt, has no exiſtence. It can be neither greater nor leſs in degree or duration, nor any thing elſe in kind, than it is felt to be. It cannot exiſt by itſelf, nor in any ſubject, but in a ſentient being. No quality of an inanimate inſentient being can have the leaſt reſemblance to it.

What we have ſaid of pain may be applied to every other ſenſation. Some of them are agreeable, others uneaſy, in various degrees. Theſe being objects of deſire or averſion, have ſome attention given to them; but many are indifferent, and ſo little attended to, that they have no name in any language.

Moſt operations of the mind, that have names in common language, are complex in their nature, and made up of various ingredients, or more ſimple acts; which, though conjoined in our conſtitution, muſt be diſjoined by abſtraction, in order to our having a diſtinct and ſcientific notion of the complex operation. In ſuch

operations, ſenſation for the moſt part makes an ingredient. Thoſe who do not attend to the complex nature of ſuch operations, are apt to reſolve them into ſome one of the ſimple acts of which they are compounded, overlooking the others: And from this cauſe many diſputes have been raiſed, and many errors have been occaſioned with regard to the nature of ſuch operations.

The perception of external objects is accompanied with ſome ſenſation correſponding to the object perceived, and ſuch ſenſations have, in many caſes, in all languages, the ſame name with the external object which they always accompany. The difficulty of disjoining by abſtraction, things thus conſtantly conjoined in the courſe of nature, and things, which have one and the ſame name in all languages, has likewiſe been frequently an occaſion of errors in the philoſophy of the mind. To avoid ſuch errors, nothing is of more importance than to have a diſtinct notion of that ſimple act of the mind which we call *ſenſation*, and which we have endeavoured to deſcribe. By this means we ſhall find it more eaſy to diſtinguiſh it from every external object that it accompanies, and from every other act of the mind that may be conjoined with it. For this purpoſe it is likewiſe of importance, that the name of *ſenſation* ſhould, in philoſophical writings, be appropriated to ſignify this ſimple act of the mind, without including

cluding any thing more in its ſignification, or being applied to other purpoſes.

I ſhall add an obſervation concerning the word *feeling*. This word has two meanings. *Firſt*, It ſignifies the perceptions we have of external objects, by the ſenſe of touch. When we ſpeak of feeling a body to be hard or ſoft, rough or ſmooth, hot or cold; to feel theſe things, is to perceive them by touch. They are external things, and that act of the mind by which we feel them, is eaſily diſtinguiſhed from the objects felt: *Secondly*, The word *feeling* is uſed to ſignify the ſame thing as *ſenſation*, which we have juſt now explained; and, in this ſenſe, it has no object; the feeling and the thing felt are one and the ſame.

Perhaps betwixt feeling, taken in this laſt ſenſe, and ſenſation, there may be this ſmall difference, that ſenſation is moſt commonly uſed to ſignify thoſe feelings which we have by our external ſenſes and bodily appetites, and all our bodily pains and pleaſures. But there are *feelings* of a nobler nature accompanying our affections, our moral judgments, and our determinations in matters of taſte, to which the word *ſenſation* is leſs properly applied.

I have premiſed theſe obſervations on the meaning of certain words that frequently occur in treating of this ſubject, for two reaſons, *firſt*, That I may be the better underſtood when I

uſe them; and, *ſecondly*, That thoſe who would make any progreſs in this branch of ſcience, may accuſtom themſelves to attend very carefully to the meaning of words that are uſed in it. They may be aſſured of this, that the ambiguity of words, and the vague and improper application of them, have thrown more darkneſs upon this ſubject, than the ſubtilty and intricacy of things.

When we uſe common words, we ought to uſe them in the ſenſe in which they are moſt commonly uſed by the beſt and pureſt writers in the language; and, when we have occaſion to enlarge or reſtrict the meaning of a common word, or to give it more preciſion than it has in common language, the reader ought to have warning of this, otherwiſe we ſhall impoſe upon ourſelves and upon him.

A very reſpectable writer has given us a good example of this kind, by explaining, in an Appendix to his *Elements of Criticiſm*, the terms he has occaſion to uſe. In that Appendix, moſt of the words are explained on which I have been making obſervations. And the explication I have given, I think, agrees, for the moſt part, with his.

Other words that need explication ſhall be explained as they occur.

CHAP.

CHAP. II.

Principles taken for granted.

AS there are words common to Philoſophers and to the vulgar, which need no explication; ſo there are principles common to both, which need no proof, and which do not admit of direct proof.

One who applies to any branch of ſcience muſt be come to years of underſtanding, and conſequently muſt have exerciſed his reaſon, and the other powers of his mind, in various ways. He muſt have formed various opinions and principles, by which he conducts himſelf in the affairs of life. Of thoſe principles, ſome are common to all men, being evident in themſelves, and ſo neceſſary in the conduct of life, that a man cannot live and act according to the rules of common prudence without them.

All men that have common underſtanding agree in ſuch principles, and conſider a man as lunatic, or deſtitute of common ſenſe, who denies, or calls them in queſtion. Thus, if any man were found of ſo ſtrange a turn as not to believe his own eyes; to put no truſt in his ſenſes, nor have the leaſt regard to their teſtimony; would any man think it worth while to reaſon gravely with ſuch a perſon, and, by argument,

gument, to convince him of his error? Surely no wiſe man would. For before men can reaſon together, they muſt agree in firſt principles; and it is impoſſible to reaſon with a man who has no principles in common with you.

There are, therefore, common principles, which are the foundation of all reaſoning, and of all ſcience. Such common principles ſeldom admit of direct proof, nor do they need it. Men need not to be taught them; for they are ſuch as all men of common underſtanding know; or ſuch, at leaſt, as they give a ready aſſent to, as ſoon as they are propoſed and underſtood.

Such principles, when we have occaſion to uſe them in ſcience, are called *axioms*. And, although it be not abſolutely neceſſary, yet it may be of great uſe, to point out the principles or axioms on which a ſcience is grounded.

Thus, mathematicians, before they prove any of the propoſitions of mathematics, lay down certain axioms, or common principles, upon which they build their reaſonings. And although thoſe axioms be truths which every man knew before; ſuch as, That the whole is greater than a part, That equal quantities added to equal quantities, make equal ſums; yet, when we ſee nothing aſſumed in the proof of mathematical propoſitions, but ſuch ſelf-evident axioms, the propoſitions appear more certain, and leave no room for doubt or diſpute.

In

In all other ſciences, as well as in mathematics, it will be found, that there are a few common principles, upon which all the reaſonings in that ſcience are grounded, and into which they may be reſolved. If theſe were pointed out and conſidered, we ſhould be better able to judge what ſtreſs may be laid upon the concluſions in that ſcience. If the principles be certain, the concluſions juſtly drawn from them muſt be certain. If the principles be only probable, the concluſions can only be probable. If the principles be falſe, dubious, or obſcure, the ſuperſtructure that is built upon them muſt partake of the weakneſs of the foundation.

Sir ISSAC NEWTON, the greateſt of Natural Philoſophers, has given an example well worthy of imitation, by laying down the common principles or axioms, on which the reaſonings in natural philoſophy are built. Before this was done, the reaſonings of Philoſophers, in that ſcience, were as vague and uncertain as they are in moſt others. Nothing was fixed; all was diſpute and controverſy: But, by this happy expedient, a ſolid foundation is laid in that ſcience, and a noble ſuperſtructure is raiſed upon it, about which there is now no more diſpute or controverſy among men of knowledge, than there is about the concluſions of mathematics.

It may, however, be obſerved, that the firſt principles of natural philoſophy are of a quite different nature from mathematical axioms: They have not the ſame kind of evidence, nor are they neceſſary truths, as mathematical axioms are: They are ſuch as theſe: That ſimilar effects proceed from the ſame or ſimilar cauſes: That we ought to admit of no other cauſes of natural effects, but ſuch as are true, and ſufficient to account for the effects. Theſe are principles, which, though they have not the ſame kind of evidence that mathematical axioms have; yet have ſuch evidence, that every man of common underſtanding readily aſſents to them, and finds it abſolutely neceſſary to conduct his actions and opinions by them, in the ordinary affairs of life.

Though it has not been uſual, yet, I conceive it may be uſeful, to point out ſome of thoſe things which I ſhall take for granted, as firſt principles in treating of the mind and its faculties. There is the more occaſion for this; becauſe very ingenious men, ſuch as DES CARTES, MALEBRANCHE, ARNAULD, LOCKE, and many others, have loſt much labour, by not diſtinguiſhing things which require proof, from things which, though they may admit of illuſtration, yet being ſelf-evident, do not admit of proof. When men attempt to deduce ſuch ſelf-evident principles from others more evident, they always fall

fall into inconcluſive reaſoning: And the conſequence of this has been, that others, ſuch as BERKELEY and HUME, finding the arguments brought to prove ſuch firſt principles to be weak and inconcluſive, have been tempted firſt to doubt of them, and afterwards to deny them.

It is ſo irkſome to reaſon with thoſe who deny firſt principles, that wiſe men commonly decline it. Yet it is not impoſſible, that what is only a vulgar prejudice may be miſtaken for a firſt principle. Nor is it impoſſible, that what is really a firſt principle may, by the enchantment of words, have ſuch a miſt thrown about it, as to hide its evidence, and to make a man of candour doubt of it. Such caſes happen more frequently perhaps in this ſcience than in any other; but they are not altogether without remedy. There are ways by which the evidence of firſt principles may be made more apparent when they are brought into diſpute; but they require to be handled in a way peculiar to themſelves. Their evidence is not demonſtrative, but intuitive. They require not proof, but to be placed in a proper point of view. This will be ſhown more fully in its proper place, and applied to thoſe very principles which we now aſſume. In the mean time, when they are propoſed as firſt principles, the reader is put on his guard, and warned to conſider whether they have a juſt claim to that character.

1. *Firſt,*

1. *Firſt*, then, I ſhall take it for granted, that I *think*, that I *remember*, that I *reaſon*, and, in general, that I really perform all thoſe operations of mind of which I am conſcious.

The operations of our minds are attended with *conſciouſneſs;* and this conſciouſneſs is the evidence, the only evidence which we have or can have of their exiſtence. If a man ſhould take it into his head to think or to ſay that his concioufneſs may deceive him, and to require proof that it cannot, I know of no proof that can be given him; he muſt be left to himſelf as a man that denies firſt principles, without which there can be no reaſoning. Every man finds himſelf under a neceſſity of believing what conſciouſneſs teſtifies, and every thing that hath this teſtimony is to be taken as a firſt principle.

2. As by conſciouſneſs we know certainly the exiſtence of our preſent thoughts and paſſions; ſo we know the paſt by *remembrance*. And when they are recent, and the remembrance of them freſh, the knowledge of them, from ſuch diſtinct remembrance, is, in its certainty and evidence, next to that of conſciouſneſs.

3. But it is to be obſerved, that we are conſcious of many things to which we give little or no attention. We can hardly attend to ſeveral things at the ſame time; and our attention

tion is commonly employed about that which is the object of our thought, and rarely about the thought itself. Thus, when a man is angry, his attention is turned to the injury done him, or the injurious person; and he gives very little attention to the passion of anger, although he is conscious of it. It is in our power, however, when we come to the years of understanding, to give attention to our own thoughts and passions, and the various operations of our minds. And when we make these the objects of our attention, either while they are present, or when they are recent and fresh in our memory, this act of the mind is called *reflection*.

We take it for granted, therefore, that, by attentive reflection, a man may have a clear and certain knowledge of the operations of his own mind; a knowledge no less clear and certain, than that which he has of an external object when it is set before his eyes.

This *reflection* is a kind of intuition; it gives a like conviction with regard to internal objects, or things in the mind, as the faculty of seeing gives with regard to objects of sight. A man must, therefore, be convinced beyond possibility of doubt, of every thing with regard to the operations of his own mind, which he clearly and distinctly discerns by attentive reflection.

4. I take it for granted, that all the thoughts I am conſcious of, or remember, are the thoughts of one and the ſame thinking principle, which I call *myſelf* or my *mind*. Every man has an immediate and irreſiſtible conviction, not only of his preſent exiſtence, but of his continued exiſtence and identity, as far back as he can remember. If any man ſhould think fit to demand a proof that the thoughts he is ſucceſſively conſcious of belong to one and the ſame thinking principle; if he ſhould demand a proof that he is the ſame perſon to-day as he was yeſterday, or a year ago, I know no proof that can be given him: He muſt be left to himſelf, either as a man that is lunatic, or as one who denies firſt principles, and is not to be reaſoned with.

Every man of a ſound mind finds himſelf under a neceſſity of believing his own identity, and continued exiſtence. The conviction of this is immediate and irreſiſtible; and if he ſhould loſe this conviction, it would be a certain proof of inſanity, which is not to be remedied by reaſoning.

5. I take it for granted, that there are ſome things which cannot exiſt by themſelves, but muſt be in ſomething elſe to which they belong, as qualities, or attributes.

Thus, motion cannot exiſt but in ſomething that is moved. And to ſuppoſe that there can

be motion while every thing is at reſt, is a groſs and palpable abſurdity. In like manner, hardneſs and ſoftneſs, ſweetneſs and bitterneſs, are things which cannot exiſt by themſelves; they are qualities of ſomething which is hard or ſoft, ſweet or bitter: That thing, whatever it be, of which they are qualities, is called their *ſubject*, and ſuch qualities neceſſarily ſuppoſe a ſubject.

Things which may exiſt by themſelves, and do not neceſſarily ſuppoſe the exiſtence of any thing elſe, are called *ſubſtances;* and with relation to the qualities or attributes that belong to them, they are called the *ſubjects* of ſuch qualities or attributes.

All the things which we immediately perceive by our ſenſes, and all the things we are conſcious of, are things which muſt be in ſomething elſe as their ſubject. Thus by my ſenſes, I perceive figure, colour, hardneſs, ſoftneſs, motion, reſiſtance, and ſuch like things. But theſe are qualities, and muſt neceſſarily be in ſomething that is figured, coloured, hard or ſoft, that moves, or reſiſts. It is not to theſe qualities, but to that which is the ſubject of them, that we give the name of *body*. If any man ſhould think fit to deny that theſe things are qualities, or that they require any ſubject, I leave him to enjoy his opinion as a man who denies firſt principles, and is not fit to be reaſoned with. If

he has common underſtanding, he will find that he cannot converſe half an hour without ſaying things which imply the contrary of what he profeſſes to believe.

In like manner, the things I am conſcious of, ſuch as thought, reaſoning, deſire, neceſſarily ſuppoſe ſomething that thinks, that reaſons, that deſires. We do not give the name of *mind* to thought, reaſon, or deſire; but to that being which thinks, which reaſons, and which deſires.

That every act or operation, therefore, ſuppoſes an agent, that every quality ſuppoſes a ſubject, are things which I do not attempt to prove, but take for granted. Every man of common underſtanding diſcerns this immediately, and cannot entertain the leaſt doubt of it. In all languages we find certain words which, by Grammarians, are called adjectives. Such words denote attributes, and every adjective muſt have a ſubſtantive to which it belongs; that is, every attribute muſt have a ſubject. In all languages we find active verbs, which denote ſome action or operation; and it is a fundamental rule in the grammar of all languages, that ſuch a verb ſuppoſes a perſon; that is, in other words, that every action muſt have an agent. We take it, therefore, as a firſt principle, that goodneſs, wiſdom, and virtue, can only be in ſome being that is good, wiſe, and virtuous;

that

that thinking ſuppoſes a being that thinks; and that every operation we are conſcious of ſuppoſes an agent that operates, which we call *mind.*

6. I take it for granted, that in moſt operations of the mind, there muſt be an *object* diſtinct from the operation itſelf. I cannot ſee, without ſeeing ſomething. To ſee without having any object of ſight is abſurd. I cannot remember, without remembering ſomething. The thing remembered is paſt, while the remembrance of it is preſent; and therefore the operation and the object of it muſt be diſtinct things. The operations of our minds are denoted, in all languages, by active tranſitive verbs, which, from their conſtruction in grammar, require not only a perſon or agent, but likewiſe an object of the operation. Thus the verb *know*, denotes an operation of mind. From the general ſtructure of language, this verb requires a perſon; I know, you know, or he knows: But it requires no leſs a noun in the accuſative caſe, denoting the thing known; for he that knows, muſt know ſomething; and to know, without having any object of knowledge, is an abſurdity too groſs to admit of reaſoning.

7. We ought likewiſe to take for granted, as firſt principles, things wherein we find an *univerſal agreement*, among the learned and unlearned, in the different nations and ages of the

world. A conſent of ages and nations, of the learned and vulgar, ought, at leaſt, to have great authority, unleſs we can ſhow ſome prejudice, as univerſal as that conſent is, which might be the cauſe of it. Truth is one, but error is infinite. There are many truths ſo obvious to the human faculties, that it may be expected that men ſhould univerſally agree in them. And this is actually found to be the caſe with regard to many truths, againſt which we find no diſſent, unleſs perhaps that of a few ſceptical Philoſophers, who may juſtly be ſuſpected, in ſuch caſes, to differ from the reſt of mankind, through pride, obſtinacy, or ſome favourite paſſion. Where there is ſuch univerſal conſent in things not deep nor intricate, but which lie, as it were, on the ſurface, there is the greateſt preſumption, that can be, that it is the natural reſult of the human faculties; and it muſt have great authority with every ſober mind that loves truth. *Major enim pars eo fere deferri ſolet quo a natura deducitur.* CIC. de Off. l. 41.

Perhaps it may be thought, that it is impoſſible to collect the opinions of all men upon any point whatſoever, and, therefore, that this maxim can be of no uſe. But there are many caſes wherein it is otherwiſe. Who can doubt, for inſtance, whether mankind have, in all ages, believed the exiſtence of a material world, and that thoſe things which they ſee and handle are real,

real, and not mere illuſions and apparitions? Who can doubt, whether mankind have univerſally believed, that every thing that begins to exiſt, and every change that happens in nature, muſt have a cauſe? Who can doubt, whether mankind have been univerſally perſuaded that there is a right and a wrong in human conduct? Some things which, in certain circumſtances, they ought to do, and other things which they ought not to do? The univerſality of theſe opinions, and of many ſuch that might be named, is ſufficiently evident, from the whole tenor of mens conduct, as far as our acquaintance reaches, and from the records of hiſtory, in all ages and nations, that are tranſmitted to us.

There are other opinions that appear to be univerſal, from what is common in the ſtructure of all languages, ancient and modern, poliſhed and barbarous. Language is the expreſs image and picture of human thoughts; and from the picture, we may often draw very certain concluſions with regard to the original. We find in all languages the ſame parts of ſpeech, nouns ſubſtantive and adjective, verbs active and paſſive, varied according to the tenſes of paſt, preſent, and future; we find adverbs, prepoſitions, and conjunctions. There are general rules of ſyntax common to all languages. This uniformity in the ſtructure of language, ſhows a cer-

tain degree of uniformity in thoſe notions upon which the ſtructure of language in grounded.

We find, in the ſtructure of all languages, the diſtinction of acting and being acted upon, the diſtinction of action and agent, of quality and ſubject, and many others of the like kind; which ſhows, that theſe diſtinctions are founded in the univerſal ſenſe of mankind. We ſhall have frequent occaſion to argue from the ſenſe of mankind expreſſed in the ſtructure of language; and therefore it was proper here to take notice of the force of arguments drawn from this topic.

8. I need hardly ſay, that I ſhall alſo take for granted ſuch facts as are atteſted to the conviction of all ſober and reaſonable men, either by our ſenſes, by memory, or by human teſtimony. Although ſome writers on this ſubject have diſputed the authority of the ſenſes, of memory, and of every human faculty; yet we find, that ſuch perſons, in the conduct of life, in purſuing their ends, or in avoiding dangers, pay the ſame regard to the authority of their ſenſes, and other faculties, as the reſt of mankind. By this they give us juſt ground to doubt of their candour in their profeſſions of ſcepticiſm.

This, indeed, has always been the fate of the few that have profeſſed ſcepticiſm, that, when they have done what they can to diſcredit their ſenſes, they find themſelves, after all, under a neceſſity

neceſſity of truſting to them. Mr HUME has been ſo candid as to acknowledge this; and it is no leſs true of thoſe who have not ſhown the ſame candour: For I never heard that any ſceptic run his head againſt a poſt, or ſtept into a kennel, becauſe he did not believe his eyes.

Upon the whole, I acknowledge that we ought to be cautious, that we do not adopt opinions as firſt principles, which are not entitled to that character. But there is ſurely the leaſt danger of mens being impoſed upon in this way, when ſuch principles openly lay claim to the character, and are thereby fairly expoſed to the examination of thoſe who may diſpute their authority. We do not pretend, that thoſe things that are laid down as firſt principles may not be examined, and that we ought not to have our ears open to what may be pleaded againſt their being admitted as ſuch. Let us deal with them, as an upright judge does with a witneſs who has a fair character. He pays a regard to the teſtimony of ſuch a witneſs, while his character is unimpeached. But if it can be ſhown that he is ſuborned, or that he is influenced by malice or partial favour, his teſtimony loſes all its credit, and is juſtly rejected.

CHAP. III.

Of Hypotheſes.

EVERY branch of human knowledge hath its proper principles, its proper foundation and method of reaſoning; and, if we endeavour to build it upon any other foundation, it will never ſtand firm and ſtable. Thus the hiſtorian builds upon teſtimony, and rarely indulges conjecture. The antiquarian mixes conjecture with teſtimony; and the former often makes the larger ingredient. The mathematician pays not the leaſt regard either to teſtimony or conjecture, but deduces every thing, by demonſtrative reaſoning, from his definitions and axioms. Indeed, whatever is built upon conjecture, is improperly called ſcience; for conjecture may beget opinion, but cannot produce knowledge. Natural philoſophy muſt be built upon the phænomena of the material ſyſtem, diſcovered by obſervation and experiment.

When men firſt began to philoſophiſe, that is, to carry their thoughts beyond the objects of ſenſe, and to enquire into the cauſes of things, and the ſecret operations of nature, it was very natural for them to indulge conjecture; nor was it to be expected, that, in many ages, they ſhould diſcover the proper and ſcientific way of proceeding

ceeding in philoſophical diſquiſitions. Accordingly we find, that the moſt ancient ſyſtems in every branch of philoſophy were nothing but the conjectures of men famous for their wiſdom, whoſe fame gave authority to their opinions. Thus, in early ages, wiſe men conjectured, that this earth is a vaſt plain, furrounded on all hands by a boundleſs ocean. That from this ocean, the ſun, moon, and ſtars, emerge at their riſing, and plunge into it again at their ſetting.

With regard to the mind, men in their rudeſt ſtate are apt to conjecture, that the principle of life in a man is his breath; becauſe the moſt obvious diſtinction between a living and a dead man is, that the one breathes, and the other does not. To this it is owing, that, in ancient languages, the word which denotes the ſoul, is that which properly ſignifies breath or air.

As men advance in knowledge, their firſt conjectures appear filly and childiſh, and give place to others, which tally better with later obſervations and diſcoveries. Thus, one ſyſtem of philoſophy ſucceeds another, without any claim to ſuperior merit, but this, that it is a more ingenious ſyſtem of conjectures, and accounts better for common appearances.

To omit many ancient ſyſtems of this kind, DES CARTES, about the middle of the laſt century, diſſatisfied with the *materia prima*, the *ſubſtantial forms*, and the *occult qualities* of the Peripatetics,

Peripatetics, conjectured boldly, that the heavenly bodies of our ſyſtem are carried round by a vortex or whirlpool of ſubtile matter, juſt as ſtraws and chaff are carried round in a tub of water. He conjectured, that the ſoul is ſeated in a ſmall gland in the brain, called the *pineal gland:* That there, as in her chamber of preſence, ſhe receives intelligence of every thing that affects the ſenſes, by means of a ſubtile fluid contained in the nerves, called the animal ſpirits; and that ſhe diſpatches theſe animal ſpirits, as her meſſengers, to put in motion the ſeveral muſcles of the body, as there is occaſion. By ſuch conjectures as theſe, DES CARTES could account for every phænomenon in nature, in ſuch a plauſible manner, as gave ſatisfaction to a great part of the learned world for more than half a century.

Such conjectures in philoſophical matters have commonly got the name of *hypotheſes* or *theories*. And the invention of a hypotheſis, founded on ſome ſlight probabilities, which accounts for many appearances of nature, has been conſidered as the higheſt attainment of a Philoſopher. If the hypotheſis hangs well together, is embelliſhed by a lively imagination, and ſerves to account for common appearances; it is conſidered by many as having all the qualities that ſhould recommend it to our belief; and all that ought to be required in a philoſophical ſyſtem.

There

There is ſuch proneneſs in men of genius to invent hypotheſes, and in others to acquieſce in them as the utmoſt which the human faculties can attain in philoſophy, that it is of the laſt conſequence to the progreſs of real knowledge, that men ſhould have a clear and diſtinct underſtanding of the nature of hypotheſes in philoſophy, and of the regard that is due to them.

Although ſome conjectures may have a conſiderable degree of probability, yet it is evidently in the nature of conjecture to be uncertain. In every caſe, the aſſent ought to be proportioned to the evidence; for to believe firmly, what has but a ſmall degree of probability, is a manifeſt abuſe of our underſtanding. Now, though we may, in many caſes, form very probable conjectures concerning the works of men, every conjecture we can form with regard to the works of God, has as little probability as the conjectures of a child with regard to the works of a man.

The wiſdom of God exceeds that of the wiſeſt man, more than that of the wiſeſt man exceeds the wiſdom of a child. If a child were to conjecture how an army is to be formed in the day of battle; how a city is to be fortified, or a ſtate governed; what chance has he to gueſs right? As little chance has the wiſeſt man when he pretends to conjecture how the planets move in their courſes, how

how the ſea ebbs and flows, and how our minds act upon our bodies.

If a thouſand of the greateſt wits that ever the world produced, were, without any previous knowledge in anatomy, to ſit down and contrive how, and by what internal organs, the various functions of the human body are carried on; how the blood is made to circulate, and the limbs to move, they would not in a thouſand years hit upon any thing like the truth.

Of all the diſcoveries that have been made concerning the inward ſtructure of the human body, never one was made by conjecture. Accurate obſervations of Anatomiſts have brought to light innumerable artifices of nature in the contrivance of this machine of the human body, which we cannot but admire as excellently adapted to their ſeveral purpoſes. But the moſt ſagacious Phyſiologiſt never dreamed of them till they were diſcovered. On the other hand, innumerable conjectures, formed in different ages, with regard to the ſtructure of the body, have been confuted by obſervation, and none ever confirmed.

What we have ſaid of the internal ſtructure of the human body, may be ſaid, with juſtice, of every other part of the works of GOD, wherein any real diſcovery has been made. Such diſcoveries have always been made by patient obſervation, by accurate experiments, or by concluſions

cluſions drawn by ſtrict reaſoning from obſervations and experiments; and ſuch diſcoveries have always tended to refute, but not to confirm, the theories and hypotheſes which ingenious men had invented.

As this is a fact confirmed by the hiſtory of philoſophy in all paſt ages, it ought to have taught men, long ago, to treat with juſt contempt hypotheſes in every branch of philoſophy, and to deſpair of ever advancing real knowledge in that way. The Indian Philoſopher, being at a loſs to know how the earth was ſupported, invented the hypotheſis of a huge elephant; and this elephant he ſuppoſed to ſtand upon the back of a huge tortoiſe. This hypotheſis, however ridiculous it appears to us, might ſeem very reaſonable to other Indians, who knew no more than the inventor of it; and the ſame will be the fate of all hypotheſes invented by men to account for the works of GOD: They may have a decent and plauſible appearance to thoſe who are not more knowing than the inventor; but, when men come to be more enlightened, they will always appear ridiculous and childiſh.

This has been the caſe with regard to hypotheſes that have been revered by the moſt enlightened part of mankind for hundreds of years; and it will always be the caſe to the end of the world. For, until the wiſdom of men bear ſome proportion to the wiſdom of GOD, their attempts

to find out the ſtructure of his works by the force of their wit and genius, will be vain.

The fineſt productions of human art are immenſely ſhort of the meaneſt works of nature. The niceſt artiſt cannot make a feather, or the leaf of a tree. Human workmanſhip will never bear a compariſon with divine. Conjectures and hypotheſes are the invention and the workmanſhip of men, and muſt bear proportion to the capacity and ſkill of the inventor; and therefore will always be very unlike to the works of GOD, which it is the buſineſs of philoſophy to diſcover.

The world has been ſo long befooled by hypotheſes in all parts of philoſophy, that it is of the utmoſt conſequence to every man, who would make any progreſs in real knowledge, to treat them with juſt contempt as the reveries of vain and fanciful men, whoſe pride makes them conceive themſelves able to unfold the myſteries of nature by the force of their genius. A learned man, in an epiſtle to DES CARTES, has the following obſervation, which very much deſerved the attention of that Philoſopher, and of all that come after him. "When men, ſitting in their "cloſet, and conſulting only their books, at- "tempt diſquiſitions into nature, they may in- "deed tell how they would have made the "world, if GOD had given them that in com- "miſſion; that is, they may deſcribe chimeras,

" which correſpond with the imbecillity of their " own minds, no leſs than the admirable beauty " of the Univerſe correſponds with the infinite " perfection of its Creator; but without an un- " derſtanding truly divine, they can never form " ſuch an idea to themſelves as the Deity had " in creating things."

Let us, therefore, lay down this as a fundamental principle in our enquiries into the ſtructure of the mind, and its operations, that no regard is due to the conjectures or hypotheſes of Philoſophers, however ancient, however generally received. Let us accuſtom ourſelves to try every opinion by the touchſtone of fact and experience. What can fairly be deduced from facts duly obſerved, or ſufficiently atteſted, is genuine and pure; it is the voice of GOD, and no fiction of human imagination.

The firſt rule of philoſophiſing laid down by the great NEWTON, is this: *Cauſas rerum naturalium, non plures admitti debere, quam quæ et veræ ſint, et earum phænomenis explicandis ſufficiant.* " No more cauſes, nor any other cauſes of na- " tural effects ought to be admitted, but ſuch as " are both true, and are ſufficient for explaining " their appearances." This is a golden rule; it is the true and proper teſt, by which what is ſound and ſolid in philoſophy may be diſtinguiſhed from what is hollow and vain.

If

If a Philoſopher, therefore, pretend to ſhow us the cauſe of any natural effect, whether relating to matter or to mind; let us firſt conſider whether there be ſufficient evidence that the cauſe he aſſigns does really exiſt. If there be not, reject it with diſdain as a fiction which ought to have no place in genuine philoſophy. If the cauſe aſſigned really exiſt, conſider in the next place, whether the effect it is brought to explain neceſſarily follow from it. Unleſs it have theſe two conditions, it is good for nothing.

When NEWTON had ſhown the admirable effects of gravitation in our planetary ſyſtem, he muſt have felt a ſtrong deſire to know its cauſe. He could have invented a hypotheſis for this purpoſe, as many had done before him. But his philoſophy was of another complexion. Let us hear what he ſays: *Rationem harum gravitatis proprietatum ex phænomenis non potui deducere, et hypotheſes non fingo. Quicquid enim ex phænomenis non deducitur, hypotheſis vocanda eſt. Et hypotheſes, ſeu metaphyſicæ, ſeu phyſicæ, ſeu qualitatum occultarum, ſeu mechanicæ, in philoſophia experimentali locum non habent.*

CHAP.

CHAP. IV.

Of Analogy.

IT is natural to men to judge of things leſs known, by ſome ſimilitude they obſerve, or think they obſerve, between them and things more familiar or better known. In many caſes, we have no better way of judging. And where the things compared have really a great ſimilitude in their nature, when there is reaſon to think that they are ſubject to the ſame laws, there may be a conſiderable degree of probability in concluſions drawn from analogy.

Thus, we may obſerve a very great ſimilitude between this earth which we inhabit, and the other planets, Saturn, Jupiter, Mars, Venus, and Mercury. They all revolve round the ſun, as the earth does, although at different diſtances, and in different periods. They borrow all their light from the ſun, as the earth does. Several of them are known to revolve round their axis like the earth, and, by that means, muſt have a like ſucceſſion of day and night. Some of them have moons, that ſerve to give them light in the abſence of the ſun, as our moon does to us. They are all, in their motions, ſubject to the ſame law of gravitation, as the earth is. From all this ſimilitude, it is not unreaſonable to think,

may, like our earth, be the various orders of living creatures. probability in this concluſion from

Phyſicians muſt, for the moſt ed in their preſcriptions by ana- conſtitution of one human body is that of another, that it is reaſonable that what is the cauſe of health or to one, may have the ſame effect upon And this generally is found true, not without ſome exceptions.

In politics, we reaſon, for the moſt part, from analogy. The conſtitution of human nature is ſo ſimilar in different ſocieties or common-wealths, that the cauſes of peace and war, of tranquillity and ſedition, of riches and poverty, of improvement and degeneracy, are much the ſame in all.

Analogical reaſoning, therefore, is not, in all caſes, to be rejected. It may afford a greater or a leſs degree of probability, according as the things compared are more or leſs ſimilar in their nature. But it ought to be obſerved, that, as this kind of reaſoning can afford only probable evidence at beſt; ſo unleſs great caution be uſed, we are apt to be led into error by it. For men are naturally diſpoſed to conceive a greater ſimilitude in things than there really is.

To

To give an inſtance of this: Anatomiſts, in ancient ages, ſeldom diſſected human bodies; but very often the bodies of thoſe quadrupeds, whoſe internal ſtructure was thought to approach neareſt to that of the human body. Modern Anatomiſts have diſcovered many miſtakes the ancients were led into, by their conceiving a greater ſimilitude between the ſtructure of men and of ſome beaſts than there is in reality. By this, and many other inſtances that might be given, it appears, that concluſions built on analogy ſtand on a ſlippery foundation; and that we ought never to reſt upon evidence of this kind, when we can have more direct evidence.

I know no Author who has made a more juſt and a more happy uſe of this mode of reaſoning, than Biſhop BUTLER, in his Analogy of Religion, Natural and Revealed, to the Conſtitution and Courſe of Nature. In that excellent Work, the Author does not ground any of the truths of religion upon analogy, as their proper evidence. He only makes uſe of analogy to anſwer objections againſt them. When objections are made againſt the truths of religion, which may be made with equal ſtrength againſt what we know to be true in the courſe of nature, ſuch objections can have no weight.

Analogical reaſoning, therefore, may be of excellent uſe in anſwering objections againſt truths which have other evidence. It may like-

wiſe give a greater or a leſs degree of probability in caſes where we can find no other evidence. But all arguments, drawn from analogy, are ſtill the weaker, the greater diſparity there is between the things compared; and therefore muſt be weakeſt of all when we compare body with mind, becauſe there are no two things in nature more unlike.

There is no ſubject in which men have always been ſo prone to form their notions by analogies of this kind, as in what relates to the mind. We form an early acquaintance with material things by means of our ſenſes, and are bred up in a conſtant familiarity with them. Hence we are apt to meaſure all things by them; and to aſcribe to things moſt remote from matter, the qualities that belong to material things. It is for this reaſon, that mankind have, in all ages, been ſo prone to conceive the mind itſelf to be ſome ſubtile kind of matter: That they have been diſpoſed to aſcribe human figure, and human organs, not only to angels, but even to the Deity. Though we are conſcious of the operations of our own minds when they are exerted, and are capable of attending to them, ſo as to form a diſtinct notion of them; this is ſo difficult a work to men, whoſe attention is conſtantly ſolicited by external objects, that we give them names from things that are familiar, and which are conceived to have ſome ſimilitude to them;

them; and the notions we form of them are no leſs analogical than the names we give them. Almoſt all the words, by which we expreſs the operations of the mind, are borrowed from material objects. To *underſtand*, to *conceive*, to *imagine*, to *comprehend*, to *deliberate*, to *infer*, and many others, are words of this kind; ſo that the very language of mankind, with regard to the operations of our minds, is analogical. Becauſe bodies are affected only by contact and preſſure, we are apt to conceive, that what is an immediate object of thought, and affects the mind, muſt be in contact with it, and make ſome impreſſion upon it. When we imagine any thing, the very word leads us to think, that there muſt be ſome image in the mind, of the thing conceived. It is evident, that theſe notions are drawn from ſome ſimilitude conceived between body and mind, and between the properties of body and the operations of mind.

To illuſtrate more fully that analogical reaſoning from a ſuppoſed ſimilitude of mind to body, which I conceive to be the moſt fruitful ſource of error with regard to the operations of our minds, I ſhall give an inſtance of it.

When a man is urged by contrary motives, thoſe on one hand inciting him to do ſome action, thoſe on the other to forbear it; he deliberates about it, and at laſt reſolves to do it, or not to do it. The contrary motives are here

compared to the weights in the oppoſite ſcales of a balance; and there is not perhaps any inſtance that can be named of a more ſtriking analogy between body and mind. Hence the phraſes of weighing motives, of deliberating upon actions, are common to all languages.

From this analogy, ſome Philoſophers draw very important concluſions. They ſay, that, as the balance cannot incline to one ſide more than the other, when the oppoſite weights are equal; ſo a man cannot poſſibly determine himſelf, if the motives on both hands are equal: and, as the balance muſt neceſſarily turn to that ſide which has moſt weight; ſo the man muſt neceſſarily be determined to that hand where the motive is ſtrongeſt. And on this foundation, ſome of the ſchoolmen maintained, that, if a hungry aſs were placed between two bundles of hay equally inviting, the beaſt muſt ſtand ſtill and ſtarve to death, being unable to turn to either, becauſe there are equal motives to both. This is an inſtance of that analogical reaſoning, which I conceive ought never to be truſted: For, the analogy between a balance and a man deliberating, though one of the ſtrongeſt that can be found between matter and mind, is too weak to ſupport any argument. A piece of dead inactive matter, and an active intelligent being, are things very unlike; and becauſe the one would remain at reſt in a certain caſe, it does not

not follow that the other would be inactive in a caſe ſomewhat ſimilar. The argument is no better than this, that, becauſe a dead animal moves only as it is puſhed, and, if puſhed with equal force in contrary directions, muſt remain at reſt; therefore the ſame thing muſt happen to a living animal; for ſurely the ſimilitude between a dead animal and a living, is as great as that between a balance and a man.

The concluſion I would draw from all that has been ſaid on analogy, is, that, in our enquiries concerning the mind, and its operations, we ought never to truſt to reaſonings, drawn from ſome ſuppoſed ſimilitude of body to mind; and that we ought to be very much upon our guard, that we be not impoſed upon by thoſe analogical terms and phraſes, by which the operations of the mind are expreſſed in all languages.

CHAP. V.

Of the proper Means of knowing the Operations of the Mind.

SINCE we ought to pay no regard to hypotheſes, and to be very ſuſpicious of analogical reaſoning, it may be aſked, from what ſource muſt the knowledge of the mind, and its faculties, be drawn?

I answer, the chief and proper ſource of this branch of knowledge is accurate reflection upon the operations of our own minds. Of this ſource we ſhall ſpeak more fully, after making ſome remarks upon two others that may be ſubſervient to it. The firſt of them is, attention to the ſtructure of language.

The language of mankind is expreſſive of their thoughts, and of the various operations of their minds. The various operations of the underſtanding, will, and paſſions, which are common to mankind, have various forms of ſpeech correſponding to them in all languages, which are the ſigns of them, and by which they are expreſſed: And a due attention to the ſigns may, in many caſes, give conſiderable light to the things ſignified by them.

There are in all languages modes of ſpeech, by which men ſignify their judgment, or give their teſtimony; by which they accept or refuſe; by which they aſk information or advice; by which they command, or threaten, or ſupplicate; by which they plight their faith in promiſes and contracts. If ſuch operations were not common to mankind, we ſhould not find in all languages forms of ſpeech, by which they are expreſſed.

All languages, indeed, have their imperfections; they can never be adequate to all the varieties of human thought; and therefore things may

may be really diſtinct in their nature, and capable of being diſtinguiſhed by the human mind, which are not diſtinguiſhed in common language. We can only expect, in the ſtructure of languages, thoſe diſtinctions which all mankind in the common buſineſs of life have occaſion to make.

There may be peculiarities in a particular language, of the cauſes of which we are ignorant, and from which, therefore, we can draw no concluſion. But whatever we find common to all languages, muſt have a common cauſe; muſt be owing to ſome common notion or ſentiment of the human mind.

We gave ſome examples of this before, and ſhall here add another. All languages have a plural number in many of their nouns; from which we may infer, that all men have notions, not of individual things only, but of attributes, or things which are common to many individuals; for no individual can have a plural number.

Another ſource of information in this ſubject, is a due attention to the courſe of human actions and conduct. The actions of men are effects: Their ſentiments, their paſſions, and their affections, are the cauſes of thoſe effects; and we may, in many caſes, form a judgment of the cauſe from the effect.

The

The behaviour of parents towards their children gives ſufficient evidence, even to thoſe who never had children, that the parental affection is common to mankind. It is eaſy to ſee, from the general conduct of men, what are the natural objects of their eſteem, their admiration, their love, their approbation, their reſentment, and of all their other original diſpoſitions. It is obvious, from the conduct of men in all ages, that man is by his nature a ſocial animal; that he delights to aſſociate with his ſpecies; to converſe, and to exchange good offices with them.

Not only the actions, but even the opinions of men may ſometimes gives light into the frame of the human mind. The opinions of men may be conſidered as the effects of their intellectual powers, as their actions are the effects of their active principles. Even the prejudices and errors of mankind, when they are general, muſt have ſome cauſe no leſs general; the diſcovery of which will throw ſome light upon the frame of the human underſtanding.

I conceive this to be the principal uſe of the hiſtory of philoſophy. When we trace the hiſtory of the various philoſophical opinions that have ſprung up among thinking men, we are led into a labyrinth of fanciful opinions, contradictions, and abſurdities, intermixed with ſome truths; yet we may ſometimes find a clue to

lead us through the ſeveral windings of this labyrinth: We may find that point of view which preſented things to the author of the ſyſtem, in the light in which they appeared to him. This will often give a conſiſtency to things ſeemingly contradictory, and ſome degree of probability to thoſe that appeared moſt fanciful.

The hiſtory of philoſophy, conſidered as a map of the intellectual operations of men of genius, muſt always be entertaining, and may ſometimes give us views of the human underſtanding, which could not eaſily be had any other way.

I return to what I mentioned as the main ſource of information on this ſubject; attentive reflection upon the operations of our own mind.

All the notions we have of mind, and of its operations, are, by Mr LOCKE, called *ideas of reflection*. A man may have as diſtinct notions of remembrance, of judgment, of will, of deſire, as he has of any object whatever. Such notions, as Mr LOCKE juſtly obſerves, are got by the power of reflection. But what is this power of reflection? It is, ſays the ſame author, "that power by which the mind turns its view "inward, and obſerves its own actions and ope-"rations." He obſerves elſewhere, "That the "underſtanding, like the eye, whilſt it makes "us ſee and perceive all other things, takes no "notice

" notice of itſelf; and that it requires art and " pains to ſet it at a diſtance, and make it its " own object." CICERO hath expreſſed this ſentiment moſt beautifully. Tuſc. I. 28.

This power of the underſtanding to make its own operations its object, to attend to them, and examine them on all ſides, is the power of reflection, by which alone we can have any diſtinct notion of the powers of our own, or of other minds.

This reflection ought to be diſtinguiſhed from conſciouſneſs, with which it is too often confounded, even by Mr LOCKE. All men are conſcious of the operations of their own minds, at all times, while they are awake; but there are few who reflect upon them, or make them objects of thought.

From infancy, till we come to the years of underſtanding, we are employed ſolely about external objects. And, although the mind is conſcious of its operations, it does not attend to them; its attention is turned ſolely to the external objects, about which thoſe operations are employed. Thus, when a man is angry, he is conſcious of his paſſion; but his attention is turned to the perſon who offended him, and the circumſtances of the offence, while the paſſion of anger is not in the leaſt the object of his attention.

I conceive, this is ſufficient to ſhew the difference between conſciouſneſs of the operations of our minds, and reflection upon them; and to ſhew that we may have the former without any degree of the latter. The difference between conſciouſneſs and reflection, is like to the difference between a ſuperficial view of an object which preſents itſelf to the eye, while we are engaged about ſomething elſe, and that attentive examination which we give to an object when we are wholly employed in ſurveying it. Attention is a voluntary act; it requires an active exertion to begin and to continue it; and it may be continued as long as we will; but conſciouſneſs is involuntary and of no continuance, changing with every thought.

The power of reflection upon the operations of their own minds does not appear at all in children. Men muſt be come to ſome ripeneſs of underſtanding before they are capable of it. Of all the powers of the human mind, it ſeems to be the laſt that unfolds itſelf. Moſt men ſeem incapable of acquiring it in any conſiderable degree. Like all our other powers, it is greatly improved by exerciſe; and until a man has got the habit of attending to the operations of his own mind, he can never have clear and diſtinct notions of them, nor form any ſteady judgment concerning them. His opinions muſt be borrowed from others, his notions confuſed and indiſtinct, and he may eaſily be led to ſwallow

low very groſs abſurdities. To acquire this habit, is a work of time and labour, even in thoſe who begin it early, and whoſe natural talents are tolerably fitted for it; but the difficulty will be daily diminiſhing, and the advantage of it is great. They will thereby be enabled to think with preciſion and accuracy on every ſubject, eſpecially on thoſe ſubjects that are more abſtract. They will be able to judge for themſelves in many important points, wherein others muſt blindly follow a leader.

CHAP. VI.

Of the Difficulty of attending to the Operations of our own Minds.

THE difficulty of attending to our mental operations ought to be well underſtood, and juſtly eſtimated, by thoſe who would make any progreſs in this ſcience; that they may neither, on the one hand, expect ſucceſs without pains and application of thought; nor, on the other, be diſcouraged, by conceiving that the obſtacles that lie in the way are inſuperable, and that there is no certainty to be attained in it. I ſhall, therefore, endeavour to point out the cauſes of this difficulty, and the effects that have ariſen from it, that we may be able to form a true judgment of both.

The

1. The number and quick ſucceſſion of the operations of the mind make it difficult to give due attention to them. It is well known, that if a great number of objects be preſented in quick ſucceſſion, even to the eye, they are confounded in the memory and imagination. We retain a confuſed notion of the whole, and a more confuſed one of the ſeveral parts, eſpecially if they are objects to which we have never before given particular attention. No ſucceſſion can be more quick than that of thought. The mind is buſy while we are awake, continually paſſing from one thought, and one operation, to another. The ſcene is conſtantly ſhifting. Every man will be ſenſible of this, who tries but for one minute to keep the ſame thought in his imagination, without addition or variation. He will find it impoſſible to keep the ſcene of his imagination fixed. Other objects will intrude without being called, and all he can do is to reject theſe intruders as quickly as poſſible, and return to his principal object.

2. In this exerciſe, we go contrary to habits which have been early acquired, and confirmed by long unvaried practice. From infancy, we are accuſtomed to attend to objects of ſenſe, and to them only; and, when ſenſible objects have got ſuch ſtrong hold of the attention by confirmed habit, it is not eaſy to diſpoſſeſs them. When we grow up, a variety of external objects ſolicits

our

... our curioſity, engages our
... our paſſions; and the con-
... ment, about external ob-
... mind from attending to it-
... ing is more juſt than the ob-
... Mr LOCKE before mentioned,
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... perations of the mind, from their
... lead the mind to give its attention
... ther object. Our ſenſations, as will be
... terwards, are natural ſigns, and turn
... ttention to the things ſignified by them;
... that moſt of them, and thoſe the moſt
frequent and familiar, have no name in any lan-
guage. In perception, memory, judgment, ima-
gination, and reaſoning, there is an object di-
ſtinct from the operation itſelf; and, while we
are led by a ſtrong impulſe, to attend to the ob-
ject, the operation eſcapes our notice. Our paſ-
ſions, affections, and all our active powers, have,
in like manner, their objects which engroſs our
attention, and divert it from the paſſion itſelf.

4. To this we may add a juſt obſervation
made by Mr HUME, That, when the mind is
agitated by any paſſion, as ſoon as we turn our
attention from the object to the paſſion itſelf, the
paſſion ſubſides or vaniſhes, and by that means
eſcapes our enquiry. This, indeed, is common
to

to almoſt every operation of the mind: When it is exerted, we are conſcious of it; but then we do not attend to the operation, but to its object. When the mind is drawn off from the object to attend to its own operation, that operation ceaſes, and eſcapes our notice.

5. As it is not ſufficient to the diſcovery of mathematical truths, that a man be able to attend to mathematical figures; as it is neceſſary that he ſhould have the ability to diſtinguiſh accurately things that differ, and to diſcern clearly the various relations of the quantities he compares; an ability which, though much greater in thoſe who have the force of genius than in others, yet even in them requires exerciſe and habit to bring it to maturity: So, in order to diſcover the truth in what relates to the operations of the mind, it is not enough that a man be able to give attention to them; he muſt have the ability to diſtinguiſh accurately their minute differences; to reſolve and analyſe complex operations into their ſimple ingredients; to unfold the ambiguity of words, which in this ſcience is greater than in any other, and to give them the ſame accuracy and preciſion that mathematical terms have. For, indeed, the ſame preciſion in the uſe of words; the ſame cool attention to the minute differences of things; the ſame talent for abſtraction and analyſing, which fits a man for the ſtudy of mathematics, is no

leſs neceſſary in this. But there is this great difference between the two ſciences, that the objects of mathematics being things external to the mind, it is much more eaſy to attend to them, and fix them ſteadily in the imagination.

The difficulty attending our enquiries into the powers of the mind, ſerves to account for ſome events reſpecting this branch of philoſophy, which deſerve to be mentioned.

While moſt branches of ſcience have, either in ancient or in modern times, been highly cultivated, and brought to a conſiderable degree of perfection, this remains, to this day, in a very low ſtate, and as it were in its infancy.

Every ſcience invented by men muſt have its beginning and its progreſs; and, from various cauſes, it may happen, that one ſcience ſhall be brought to a great degree of maturity, while another is yet in its infancy. The maturity of a ſcience may be judged of by this: When it contains a ſyſtem of principles, and concluſions drawn from them, which are ſo firmly eſtabliſhed, that, among thinking and intelligent men, there remains no doubt or diſpute about them; ſo that thoſe who come after may raiſe the ſuperſtructure higher, but ſhall never be able to overturn what is already built, in order to begin on a new foundation.

Geometry ſeems to have been in its infancy about the time of THALES and PYTHAGORAS; becauſe

becauſe many of the elementary propoſitions, on which the whole ſcience is built, are aſcribed to them as the inventors. EUCLID's Elements, which were written ſome ages after PYTHAGORAS, exhibit a ſyſtem of geometry which deſerves the name of a ſcience; and though great additions have been made by APPOLLONIUS, ARCHIMEDES, PAPPUS, and others among the ancients, and ſtill greater by the moderns; yet what was laid down in EUCLID's Elements was never ſet aſide. It remains as the firm foundation of all future ſuperſtructures in that ſcience.

Natural philoſophy remained in its infant ſtate near two thouſand years after geometry had attained to its manly form: For natural philoſophy ſeems not to have been built on a ſtable foundation, nor carried to any degree of maturity, till the laſt century. The ſyſtem of DES CARTES, which was all hypotheſis, prevailed in the moſt enlightened part of Europe till towards the end of laſt century. Sir ISAAC NEWTON has the merit of giving the form of a ſcience to this branch of philoſophy; and it need not appear ſurpriſing, if the philoſophy of the human mind ſhould be a century or two later in being brought to maturity.

It has received great acceſſions from the labours of ſeveral modern authors; and perhaps wants little more to entitle it to the name of a ſcience, but to be purged of certain hypotheſes,

which have impoſed on ſome of the moſt acute writers on this ſubject, and led them into downright ſcepticiſm.

What the ancients have delivered to us concerning the mind, and its operations, is almoſt entirely drawn, not from accurate reflection, but from ſome conceived analogy between body and mind. And although the modern authors I formerly named have given more attention to the operations of their own minds, and by that means have made important diſcoveries; yet, by retaining ſome of the ancient analogical notions, their diſcoveries have been leſs uſeful than they might have been, and have led to ſcepticiſm.

It may happen in ſcience, as in building, that an error in the foundation ſhall weaken the whole; and the farther the building is carried on, this weakneſs ſhall become the more apparent and the more threatening. Something of this kind ſeems to have happened in our ſyſtems concerning the mind. The acceſſion they have received by modern diſcoveries, though very important in itſelf, has thrown darkneſs and obſcurity upon the whole, and has led men rather to ſcepticiſm than to knowledge. This muſt be owing to ſome fundamental errors that have not been obſerved; and when theſe are corrected, it is to be hoped, that the improvements that have been made will have their due effect.

The

The laſt effect I obſerve of the difficulty of enquiries into the powers of the mind, is, that there is no other part of human knowledge, in which ingenious authors have been ſo apt to run into ſtrange paradoxes, and even into groſs abſurdities.

When we find Philoſophers maintaining, that there is no heat in the fire, nor colour in the rainbow: When we find the graveſt Philoſophers, from DES CARTES down to Biſhop BERKELEY, muſtering up arguments to prove the exiſtence of a material world, and unable to find any that will beat examination: When we find Biſhop BERKELEY and Mr HUME, the acuteſt Metaphyſicians of the age, maintaining, that there is no ſuch thing as matter in the univerſe: That ſun, moon, and ſtars, the earth which we inhabit, our own bodies, and thoſe of our friends, are only ideas in our minds, and have no exiſtence but in thought: When we find the laſt maintaining, that there is neither body nor mind; nothing in nature but ideas and impreſſions, without any ſubſtance on which they are impreſſed: That there is no certainty, nor indeed probability, even in mathematical axioms: I ſay, when we conſider ſuch extravagancies of many of the moſt acute writers on this ſubject, we may be apt to think the whole to be only a dream of fanciful men, who have entangled themſelves in cobwebs ſpun out of their own brain. But we

ought to conſider, that the more cloſely and ingeniouſly men reaſon from falſe principles, the more abſurdities they will be led into; and when ſuch abſurdities help to bring to light the falſe principles from which they are drawn, they may be the more eaſily forgiven.

CHAP. VII.

Diviſion of the Powers of the Mind.

THE powers of the mind are ſo many, ſo various, and ſo connected and complicated in moſt of its operations, that there never has been any diviſion of them propoſed which is not liable to conſiderable objections. We ſhall therefore take that general diviſion which is the moſt common, into the powers of *underſtanding* and thoſe of *will*. Under the will we comprehend our active powers, and all that lead to action, or influence the mind to act; ſuch as, appetites, paſſions, affections. The underſtanding comprehends our contemplative powers; by which we perceive objects; by which we conceive or remember them; by which we analyſe or compound them; and by which we judge and reaſon concerning them.

Although this general diviſion may be of uſe in order to our proceeding more methodically

in

in our ſubject, we are not to underſtand it as if, in thoſe operations which are aſcribed to the underſtanding, there were no exertion of will or activity, or as if the underſtanding were not employed in the operations aſcribed to the will; for I conceive there is no operation of the underſtanding wherein the mind is not active in ſome degree. We have ſome command over our thoughts, and can attend to this or to that, of many objects which preſent themſelves to our ſenſes, to our memory, or to our imagination. We can ſurvey an object on this ſide or that, ſuperficially or accurately, for a longer or a ſhorter time; ſo that our contemplative powers are under the guidance and direction of the active; and the former never purſue their object, without being led and directed, urged or reſtrained by the latter: And becauſe the underſtanding is always more or leſs directed by the will, mankind have aſcribed ſome degree of activity to the mind in its intellectual operations, as well as in thoſe which belong to the will; and have expreſſed them by active verbs, ſuch as ſeeing, hearing, judging, reaſoning, and the like.

And as the mind exerts ſome degree of activity even in the operations of underſtanding, ſo it is certain, that there can be no act of will which is not accompanied with ſome act of underſtanding. The will muſt have an object, and that object muſt be apprehended or conceived in

the underſtanding. It is therefore to be remembered, that in moſt, if not all operations of the mind, both faculties concur; and we range the operation under that faculty which hath the largeſt ſhare in it.

The intellectual powers are commonly divided into ſimple apprehenſion, judgment, and reaſoning. As this diviſion has in its favour the authority of antiquity, and of a very general reception, it would be improper to ſet it aſide without giving any reaſon; I ſhall therefore explain it briefly, and give the reaſons why I chuſe to follow another.

It may be obſerved, that, without apprehenſion of the objects, concerning which we judge, there can be no judgment; as little can there be reaſoning without both apprehenſion and judgment: Theſe three operations, therefore, are not independent of each other. The ſecond includes the firſt, and the third includes both the firſt and ſecond: But the firſt may be exerciſed without either of the other two. It is on that account called *ſimple apprehenſion*; that is, apprehenſion unaccompanied with any judgment about the object apprehended. This ſimple apprehenſion of an object is, in common language, called *having a notion*, or *having a conception* of the object, and by late authors is called *having an idea of it*. In ſpeaking, it is expreſſed by a word, or by a part of a propoſition, without that compoſition

compoſition and ſtructure which makes a complete ſentence; as *a man, a man of fortune.* Such words, taken by themſelves, ſignify ſimple apprehenſions. They neither affirm nor deny; they imply no judgment or opinion of the thing ſignified by them, and therefore cannot be ſaid to be either true or falſe.

The ſecond operation in this diviſion is *judgment;* in which, ſay the Philoſophers, there muſt be two objects of thought compared, and ſome agreement or diſagreement, or, in general, ſome relation diſcerned between them; in conſequence of which, there is an opinion or belief of that relation which we diſcern. This operation is expreſſed in ſpeech by a propoſition, in which ſome relation between the things compared is affirmed or denied: As when we ſay, *All men are fallible.*

Truth and falſehood are qualities which belong to judgment only; or to propoſitions by which judgment is expreſſed. Every judgment, every opinion, and every propoſition, is either true or falſe. But words which neither affirm nor deny any thing, can have neither of thoſe qualities; and the ſame may be ſaid of ſimple apprehenſions, which are ſignified by ſuch words.

The third operation is *reaſoning;* in which, from two or more judgments, we draw a concluſion.

This diviſion of our intellectual powers correſponds perfectly with the account commonly given by Philoſophers, of the ſucceſſive ſteps by which the mind proceeds in the acquiſition of its knowledge; which are theſe three: *Firſt*, by the ſenſes, or by other means, it is furniſhed with various ſimple apprehenſions, notions or ideas. Theſe are the materials which nature gives it to work upon; and from the ſimple ideas it is furniſhed with by nature, it forms various others more complex. *Secondly*, by comparing its ideas, and by perceiving their agreements and diſagreements, it forms its judgments. And, *laſtly*, from two or more judgments, it deduces concluſions of reaſoning.

Now, if all our knowledge is got by a procedure of this kind, certainly the threefold diviſion of the powers of underſtanding, into ſimple apprehenſion, judgment, and reaſoning, is the moſt natural, and the moſt proper, that can be deviſed. This theory and that diviſion are ſo cloſely connected, that it is difficult to judge which of them has given riſe to the other; and they muſt ſtand or fall together. But if all our knowledge is not got by a proceſs of this kind; if there are other avenues of knowledge beſides the comparing our ideas, and perceiving their agreements and diſagreements, it is probable that there may be operations of the underſtanding

ing which cannot be properly reduced under any of the three that have been explained.

Let us conſider ſome of the moſt familiar operations of our minds, and ſee to which of the three they belong. I begin with conſciouſneſs. I know that I think, and this of all knowledge is the moſt certain. Is that operation of my mind, which gives me this certain knowledge, to be called ſimple apprehenſion? No, ſurely. Simple apprehenſion neither affirms nor denies. It will not be ſaid that it is by reaſoning that I know that I think. It remains, therefore, that it muſt be by judgment, that is, according to the account given of judgment, by comparing two ideas, and perceiving the agreement between them. But what are the ideas compared? They muſt be the idea of myſelf, and the idea of thought, for they are the terms of the propoſition *I think*. According to this account then, firſt, I have the idea of myſelf, and the idea of thought; then, by comparing theſe two ideas, I perceive that I think.

Let any man who is capable of reflection judge for himſelf, whether it is by an operation of this kind that he comes to be convinced that he thinks? To me it appears evident, that the conviction I have that I think, is not got in this way; and therefore I conclude, either that conſciouſneſs is not judgment, or that judgment is not

not rightly defined to be the perception of ſome agreement or diſagreement between two ideas.

The perception of an object by my ſenſes, is another operation of the underſtanding. I would know whether it be ſimple apprehenſion, or judgment, or reaſoning. It is not ſimple apprehenſion, becauſe I am perſuaded of the exiſtence of the object as much as I could be by demonſtration. It is not judgment, if by judgment be meant the comparing ideas, and perceiving their agreements or diſagreements. It is not reaſoning, becauſe thoſe who cannot reaſon can perceive.

I find the ſame difficulty in claſſing memory under any of the operations mentioned.

There is not a more fruitful ſource of error in this branch of philoſophy, than diviſions of things which are taken to be complete when they are not really ſo. To make a perfect diviſion of any claſs of things, a man ought to have the whole under his view at once. But the greateſt capacity very often is not ſufficient for this. Some thing is left out which did not come under the Philoſopher's view when he made his diviſion: And to fuit this to the diviſion, it muſt be made what nature never made it. This has been ſo common a fault of Philoſophers, that one who would avoid error ought to be ſuſpicious of diviſions, though long received, and of great authority, eſpecially when they are grounded

ed on a theory that may be called in queſtion. In a ſubject imperfectly known, we ought not to pretend to perfect diviſions, but to leave room for ſuch additions or alterations as a more perfect view of the ſubject may afterwards ſuggeſt.

I ſhall not, therefore, attempt a complete enumeration of the powers of the human underſtanding. I ſhall only mention thoſe which I propoſe to explain, and they are the following:

1ſt, The powers we have by means of our external ſenſes. *2dly*, Memory. *3dly*, Conception. *4thly*, The powers of reſolving and analyſing complex objects, and compounding thoſe that are more ſimple. *5thly*, Judging. *6thly*, Reaſoning. *7thly*, Taſte. *8thly*, Moral Perception: And, *laſt* of all, Conſciouſneſs.

CHAP. VIII.

Of ſocial Operations of Mind.

THERE is another diviſion of the powers of the mind, which, though it has been, ought not to be, overlooked by writers on this ſubject, becauſe it has a real foundation in nature. Some operations of our minds, from their very nature, are *ſocial*, others are *ſolitary*.

By the firſt, I underſtand ſuch operations as neceſſarily ſuppoſe an intercourſe with ſome other

ther intelligent being. A man may underſtand and will; he may apprehend, and judge, and reaſon, though he ſhould know of no intelligent being in the univerſe beſides himſelf. But, when he aſks information, or receives it; when he bears teſtimony, or receives the teſtimony of another; when he aſks a favour, or accepts one; when he gives a command to his ſervant, or receives one from a ſuperior; when he plights his faith in a promiſe or contract; theſe are acts of ſocial intercourſe between intelligent beings, and can have no place in ſolitude. They ſuppoſe underſtanding and will; but they ſuppoſe ſomething more, which is neither underſtanding nor will; that is, ſociety with other intelligent beings. They may be called intellectual, becauſe they can only be in intellectual beings: But they are neither ſimple apprehenſion, nor judgment, nor reaſoning, nor are they any combination of theſe operations.

To aſk a queſtion, is as ſimple an operation as to judge or to reaſon; yet it is neither judgment, nor reaſoning, nor ſimple apprehenſion, nor is it any compoſition of theſe. Teſtimony is neither ſimple apprehenſion, nor judgment, nor reaſoning. The ſame may be ſaid of a promiſe, or of a contract. Theſe acts of mind are perfectly underſtood by every man of common underſtanding; but, when Philoſophers attempt to bring them within the pale of their diviſions,

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by analyſing them, they find inexplicable myſteries, and even contradictions, in them. One may ſee an inſtance of this, of many that might be mentioned, in Mr HUME's Enquiry concerning the Principles of Morals, ſect. 3. part 2. note, near the end.

The attempts of Philoſophers to reduce the ſocial operations under the common philoſophical diviſions, reſemble very much the attempts of ſome Philoſophers to reduce all our ſocial affections to certain modifications of ſelf-love. The Author of our being intended us to be ſocial beings, and has, for that end, given us ſocial intellectual powers, as well as ſocial affections. Both are original parts of our conſtitution, and the exertions of both no leſs natural than the exertions of thoſe powers that are ſolitary and ſelfiſh.

Our ſocial intellectual operations, as well as our ſocial affections, appear very early in life, before we are capable of reaſoning; yet both ſuppoſe a conviction of the exiſtence of other intelligent beings. When a child aſks a queſtion of his nurſe, this act of his mind ſuppoſes not only a deſire to know what he aſks; it ſuppoſes likewiſe a conviction that the nurſe is an intelligent being, to whom he can communicate his thoughts, and who can communicate her thoughts to him. How he came by this conviction ſo early, is a queſtion of ſome importance

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in the knowledge of the human mind, and therefore worthy of the conſideration of Philoſophers. But they ſeem to have given no attention either to this early conviction, or to thoſe operations of mind which ſuppoſe it. Of this we ſhall have occaſion to treat afterwards.

All languages are fitted to expreſs the ſocial as well as the ſolitary operations of the mind. It may indeed be affirmed, that, to expreſs the former, is the primary and direct intention of language. A man, who had no intercourſe with any other intelligent being, would never think of language. He would be as mute as the beaſts of the field; even more ſo, becauſe they have ſome degree of ſocial intercourſe with one another, and ſome of them with man. When language is once learned, it may be uſeful even in our ſolitary meditations; and, by clothing our thoughts with words, we may have a firmer hold of them. But this was not its firſt intention; and the ſtructure of every language ſhews that it is not intended ſolely for this purpoſe.

In every language, a queſtion, a command, a promiſe, which are ſocial acts, can be expreſſed as eaſily and as properly as judgment, which is a ſolitary act. The expreſſion of the laſt has been honoured with a particular name; it is called a propoſition; it has been an object of great attention to Philoſophers; it has been analyſed into its very elements, of ſubject, predicate,

dicate, and copula. All the various modifications of theſe, and of propoſitions which are compounded of them, have been anxiouſly examined in many voluminous tracts. The expreſſion of a queſtion, of a command, or of a promiſe, is as capable of being analyſed as a propoſition is; but we do not find that this has been attempted; we have not ſo much as given them a name different from the operations which they expreſs.

Why have ſpeculative men laboured ſo anxiouſly to analyſe our ſolitary operations, and given ſo little attention to the ſocial? I know no other reaſon but this, that, in the diviſions that have been made of the mind's operations, the ſocial have been omitted, and thereby thrown behind the curtain.

In all languages, the ſecond perſon of verbs, the pronoun of the ſecond perſon, and the vocative caſe in nouns, are appropriated to the expreſſion of ſocial operations of mind, and could never have had place in language but for this purpoſe: Nor is it a good argument againſt this obſervation, that, by a rhetorical figure, we ſometimes addreſs perſons that are abſent, or even inanimated beings, in the ſecond perſon. For it ought to be remembered, that all figurative ways of uſing words or phraſes, ſuppoſe a natural and literal meaning of them.

ESSAY II.

OF THE POWERS WE HAVE BY MEANS OF OUR EXTERNAL SENSES.

CHAP. I.

Of the Organs of Senſe.

OF all the operations of our minds, the perception of external objects is the moſt familiar. The ſenſes come to maturity even in infancy, when other powers have not yet ſprung up. They are common to us with brute animals, and furniſh us with the objects about which our other powers are the moſt frequently employed. We find it eaſy to attend to their operations; and becauſe they are familiar, the names which properly belong to them are applied to other powers, which are thought to reſemble them; for theſe reaſons they claim to be firſt conſidered.

The perception of external objects is one main link of that myſterious chain, which con-

nects the material world with the intellectual. We ſhall find many things in this operation unaccountable; ſufficient to convince us, that we know but little of our own frame; and that a perfect comprehenſion of our mental powers, and of the manner of their operation, is beyond the reach of our underſtanding.

In perception there are impreſſions upon the organs of ſenſe, the nerves, and brain, which, by the laws of our nature, are followed by certain operations of mind. Theſe two things are apt to be confounded; but ought moſt carefully to be diſtinguiſhed. Some Philoſophers, without good reaſon, have concluded, that the impreſſions made on the body are the proper efficient cauſe of perception. Others, with as little reaſon, have concluded, that impreſſions are made on the mind ſimilar to thoſe made on the body. From theſe miſtakes many others have ariſen. The wrong notions men have raſhly taken up with regard to the ſenſes, have led to wrong notions with regard to other powers which are conceived to reſemble them. Many important powers of mind have, eſpecially of late, been called internal ſenſes, from a ſuppoſed reſemblance to the external; ſuch as, the ſenſe of beauty, the ſenſe of harmony, the moral ſenſe. And it is to be apprehended, that errors, with regard to the external, have, from analogy, led to ſimilar errors with regard to the internal;

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it is therefore of ſome conſequence, even with regard to other branches of our ſubject, to have juſt notions concerning the external ſenſes.

In order to this, we ſhall begin with ſome obſervations on the organs of ſenſe, and on the impreſſions which in perception are made upon them, and upon the nerves and brain.

We perceive no external object, but by means of certain bodily organs which GOD has given us for that purpoſe. The Supreme Being who made us, and placed us in this world, hath given us ſuch powers of mind as he ſaw to be ſuited to our ſtate and rank in his creation. He has given us the power of perceiving many objects around us, the ſun, moon, and ſtars, the earth and ſea, and a variety of animals, vegetables, and inanimate bodies. But our power of perceiving theſe objects is limited in various ways, and particularly in this; that without the organs of the ſeveral ſenſes, we perceive no external object. We cannot ſee without eyes, nor hear without ears: It is not only neceſſary that we ſhould have theſe organs, but that they ſhould be in a ſound and natural ſtate. There are many diſorders of the eye that cauſe total blindneſs; others that impair the powers of viſion, without deſtroying it altogether; and the ſame may be ſaid of the organs of all the other ſenſes.

All this is ſo well known from experience, that it needs no proof; but it ought to be ob-

ſerved, that we know it from experience only. We can give no reaſon for it, but that ſuch is the will of our Maker. No man can ſhew it to be impoſſible to the Supreme Being to have given us the power of perceiving external objects without ſuch organs. We have reaſon to believe, that when we put off theſe bodies, and all the organs belonging to them, our perceptive powers ſhall rather be improved than deſtroyed or impaired. We have reaſon to believe, that the Supreme Being perceives every thing in a much more perfect manner than we do, without bodily organs. We have reaſon to believe, that there are other created beings endowed with powers of perception more perfect and more extenſive than ours, without any ſuch organs as we find neceſſary.

We ought not, therefore, to conclude, that ſuch bodily organs are, in their own nature, neceſſary to perception; but rather, that, by the will of GOD, our power of perceiving external objects is limited and circumſcribed by our organs of ſenſe; ſo that we perceive objects in a certain manner, and in certain circumſtances, and in no other.

If a man was ſhut up in a dark room, ſo that he could ſee nothing but through one ſmall hole in the ſhutter of a window, Would he conclude, that the hole was the cauſe of his ſeeing, and that it is impoſſible to ſee any other way?

Perhaps,

Perhaps, if he had never in his life ſeen but in this way, he might be apt to think ſo; but the concluſion is raſh and groundleſs. He ſees, becauſe God has given him the power of ſeeing; and he ſees only through this ſmall hole, becauſe his power of ſeeing is circumſcribed by impediments on all other hands.

Another neceſſary caution in this matter is, that we ought not to confound the organs of perception with the being that perceives. Perception muſt be the act of ſome being that perceives. The eye is not that which ſees; it is only the organ by which we ſee. The ear is not that which hears; but the organ by which we hear; and ſo of the reſt.

A man cannot ſee the Satellites of Jupiter but by a teleſcope. Does he conclude from this, that it is the teleſcope that ſees thoſe ſtars? By no means; ſuch a concluſion would be abſurd. It is no leſs abſurd to conclude, that it is the eye that ſees, or the ear that hears. The teleſcope is an artificial organ of ſight, but it ſees not. The eye is a natural organ of ſight, by which we ſee; but the natural organ ſees as little as the artificial.

The eye is a machine moſt admirably contrived for refracting the rays of light, and forming a diſtinct picture of objects upon the retina; but it ſees neither the object nor the picture. It can form the picture after it is taken out of the

head; but no viſion enſues. Even when it is in its proper place, and perfectly ſound, it is well known, that an obſtruction in the optic nerve takes away viſion, though the eye has performed all that belongs to it.

If any thing more were neceſſary to be ſaid on a point ſo evident, we might obſerve, that if the faculty of ſeeing were in the eye, that of hearing in the ear, and ſo of the other ſenſes, the neceſſary conſequence of this would be, that the thinking principle, which I call myſelf, is not one, but many. But this is contrary to the irreſiſtible conviction of every man. When I ſay, I ſee, I hear, I feel, I remember, this implies that it is one and the ſame ſelf that performs all theſe operations; and as it would be abſurd to ſay, that my memory, another man's imagination, and a third man's reaſon, may make one individual intelligent being, it would be equally abſurd to ſay, that one piece of matter ſeeing, another hearing, and a third feeling, may make one and the ſame percipient being.

Theſe ſentiments are not new; they have occurred to thinking men from early ages. CICERO, in his Tuſculan Queſtions, lib. i. chap. 20. has expreſſed them very diſtinctly. Thoſe who chuſe may conſult the paſſage.

CHAP.

CHAP. II.

Of the Impreſſions on the Organs, Nerves, and Brain.

A Second law of our nature regarding perception is, that we perceive no object, unleſs ſome impreſſion is made upon the organ of ſenſe, either by the immediate application of the object, or by ſome medium which paſſes between the object and the organ.

In two of our ſenſes, to wit, *touch* and *taſte*, there muſt be an immediate application of the object to the organ. In the other three, the object is perceived at a diſtance, but ſtill by means of a medium, by which ſome impreſſion is made upon the organ.

The effluvia of bodies drawn into the noſtrils with the breath, are the medium of ſmell; the undulations of the air, are the medium of hearing; and the rays of light paſſing from viſible objects to the eye, are the medium of ſight. We ſee no object, unleſs rays of light come from it to the eye. We hear not the ſound of any body, unleſs the vibrations of ſome elaſtic medium, occaſioned by the tremulous motion of the ſounding body, reach our ear. We perceive no ſmell, unleſs the effluvia of the ſmelling body enter into the noſtrils. We perceive no taſte, unleſs

unleſs the ſapid body be applied to the tongue, or ſome part of the organ of taſte. Nor do we perceive any tangible quality of a body, unleſs it touch the hands, or ſome part of our body.

Theſe are facts known from experience to hold univerſally and invariably, both in men and brutes. By this law of our nature, our powers of perceiving external objects are farther limited and circumſcribed. Nor can we give any other reaſon for this, than that it is the will of our Maker, who knows beſt what powers, and what degrees of them, are ſuited to our ſtate. We were once in a ſtate, I mean in the womb, wherein our powers of perception were more limited than in the preſent, and, in a future ſtate, they may be more enlarged.

It is likewiſe a law of our nature, that, in order to our perceiving objects, the impreſſions made upon the organs of ſenſe muſt be communicated to the nerves, and by them to the brain. This is perfectly known to thoſe who know any thing of anatomy.

The nerves are fine cords, which paſs from the brain, or from the ſpinal marrow, which is a production of the brain, to all parts of the body, dividing into ſmaller branches as they proceed, until at laſt they eſcape our eye-ſight: And it is found by experience, that all the voluntary and involuntary motions of the body are performed by their means. When the nerves

that ſerve any limb, are cut, or tied hard, we have then no more power to move that limb than if it was no part of the body.

As there are nerves that ſerve the muſcular motions, ſo there are others that ſerve the ſeveral ſenſes; and as without the former we cannot move a limb, ſo without the latter we can have no perception.

This train of machinery the wiſdom of God has made neceſſary to our perceiving objects. Various parts of the body concur to it, and each has its own function. *Firſt*, The object either immediately, or by ſome medium, muſt make an impreſſion on the organ. The organ ſerves only as a medium, by which an impreſſion is made on the nerve; and the nerve ſerves as a medium to make an impreſſion upon the brain. Here the material part ends; at leaſt we can trace it no farther; the reſt is all intellectual.

The proof of theſe impreſſions upon the nerves and brain in perception is this, That, from many obſervations and experiments, it is found, that when the organ of any ſenſe is perfectly ſound, and has the impreſſion made upon it by the object ever ſo ſtrongly; yet, if the nerve which ſerves that organ be cut or tied hard, there is no perception: And it is well known, that diſorders in the brain deprive us of the power of perception, when both the organ and its nerve are ſound.

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There is therefore ſufficient reaſon to conclude, that, in perception, the object produces ſome change in the organ; that the organ produces ſome change upon the nerve; and that the nerve produces ſome change in the brain. And we give the name of an *impreſſion* to thoſe changes, becauſe we have not a name more proper to expreſs, in a general manner, any change produced in a body, by an external cauſe, without ſpecifying the nature of that change. Whether it be preſſure, or attraction, or repulſion, or vibration, or ſomething unknown, for which we have no name, ſtill it may be called an impreſſion. But, with regard to the particular kind of this change or impreſſion, Philoſophers have never been able to diſcover any thing at all.

But, whatever be the nature of thoſe impreſſions upon the organs, nerves, and brain, we perceive nothing without them. Experience informs that it is ſo; but we cannot give a reaſon why it is ſo. In the conſtitution of man, perception, by fixed laws of nature, is connected with thoſe impreſſions; but we can diſcover no neceſſary connection. The Supreme Being has ſeen fit to limit our power of perception; ſo that we perceive not without ſuch impreſſions; and this is all we know of the matter.

This, however, we have reaſon to conclude in general, that as the impreſſions on the organs, nerves, and brain, correſpond exactly to the nature

ture and conditions of the objects by which they are made; ſo our perceptions and ſenſations correſpond to thoſe impreſſions, and vary in kind, and in degree, as they vary. Without this exact correſpondence, the information we receive by our ſenſes would not only be imperfect, as it undoubtedly is, but would be fallacious, which we have no reaſon to think it is.

CHAP. III.

Hypotheſes concerning the Nerves and Brain.

WE are informed by Anatomiſts, that although the two coats which incloſe a nerve, and which it derives from the coats of the brain, are tough and elaſtic; yet the nerve itſelf has a very ſmall degree of conſiſtence, being almoſt like marrow. It has, however, a fibrous texture, and may be divided and ſubdivided, till its fibres eſcape our ſenſes: And as we know ſo very little about the texture of the nerves, there is great room left for thoſe who chuſe to indulge themſelves in conjecture.

The ancients conjectured, that the nervous fibres are fine tubes, filled with a very ſubtile ſpirit or vapour, which they called *animal ſpirits*; that the brain is a gland, by which the animal ſpirits are ſecreted from the finer part of the blood,

blood, and their continual waſte repaired; and that it is by theſe animal ſpirits that the nerves perform their functions. DES CARTES has ſhown how, by theſe animal ſpirits going and returning in the nerves, muſcular motion, perception, memory, and imagination, are effected. All this he has deſcribed as diſtinctly as if he had been an eye-witneſs of all thoſe operations. But it happens, that the tubular ſtructure of the nerves was never perceived by the human eye, nor ſhewn by the niceſt injections; and all that has been ſaid about animal ſpirits through more than fifteen ceuturies, is mere conjecture.

Dr BRIGGS, who was Sir ISAAC NEWTON's maſter in anatomy, was the firſt, as far as I know, who advanced a new ſyſtem concerning the nerves. He conceived them to be ſolid filaments of prodigious tenuity; and this opinion, as it accords better with obſervation, ſeems to have been more generally received ſince his time. As to the manner of performing their office, Dr BRIGGS thought, that, like muſical cords, they have vibrations differing according to their length and tenſion. They ſeem, however, very unfit for this purpoſe, on account of their want of tenacity, their moiſture, and being through their whole length in contact with moiſt ſubſtances: So that, although Dr BRIGGS wrote a book upon this ſyſtem, called *Nova Viſionis*

ſionis Theoria, it ſeems not to have been much followed.

Sir ISAAC NEWTON, in all his philoſophical writings, took great care to diſtinguiſh his doctrines, which he pretended to prove by juſt induction, from his conjectures, which were to ſtand or fall, according as future experiments and obſervations ſhould eſtabliſh or refute them. His conjectures he has put in the form of queries, that they might not be received as truths, but be enquired into, and determined according to the evidence to be found for or againſt them. Thoſe who miſtake his queries for a part of his doctrine, do him great injuſtice, and degrade him to the rank of the common herd of Philoſophers, who have in all ages adulterated philoſophy, by mixing conjecture with truth, and their own fancies with the oracles of Nature. Among other queries, this truly great Philoſopher propoſed this, Whether there may not be an elaſtic medium, or æther, immenſely more rare than air, which pervades all bodies, and which is the cauſe of gravitation; of the refraction and reflection of the rays of light; of the tranſmiſſion of heat, through ſpaces void of air; and of many other phænomena? In the 23d query ſubjoined to his Optics, he puts this queſtion, with regard to the impreſſions made on the nerves and brain in perception, Whether viſion is effected chiefly by the vibrations of this medium,

medium, excited in the bottom of the eye by the rays of light, and propagated along the ſolid, pellucid, and uniform capillaments of the optic nerve? And whether hearing is effected by the vibrations of this or ſome other medium, excited by the tremor of the air in the auditory nerves, and propagated along the ſolid, pellucid and uniform capillaments of thoſe nerves? And ſo with regard to the other ſenſes.

What NEWTON only propoſed as a matter to be enquired into, Dr HARTLEY conceived to have ſuch evidence, that, in his *Obſervations on Man*, he has deduced, in a mathematical form, a very ample ſyſtem concerning the faculties of the mind, from the doctrine of vibrations, joined with that of aſſociation.

His notion of the vibrations, excited in the nerves, is expreſſed in propoſitions 4. and 5. of the firſt part of his Obſervations on Man. "Propoſition 4. External objects impreſſed on "the ſenſes, occaſion firſt in the nerves on which "they are impreſſed, and then in the brain, vi- "brations of the ſmall, and, as one may ſay, "infiniteſimal medullary particles. Prop. 5. "The vibrations mentioned in the laſt propoſi- "tion are excited, propagated, and kept up, "partly by the æther, that is, by a very ſubtile "elaſtic fluid; partly by the uniformity, conti- "nuity, ſoftneſs, and active powers of the me- "dullary

" dullary ſubſtance of the brain, ſpinal marrow,
" and nerves."

The modeſty and diffidence with which Dr HARTLEY offers his ſyſtem to the world, by deſiring his reader "to expect nothing but hints "and conjectures in difficult and obſcure mat-"ters, and a ſhort detail of the principal reaſons "and evidences in thoſe that are clear; by ac-"nowledging, that he ſhall not be able to exe-"cute, with any accuracy, the proper method "of philoſophiſing, recommended and followed "by Sir ISAAC NEWTON; and that he will at-"tempt a ſketch only for the benefit of future "inquirers," ſeem to forbid any criticiſm upon it. One cannot, without reluctance, criticiſe what is propoſed in ſuch a manner, and with ſo good intention; yet, as the tendency of this ſyſtem of vibrations is to make all the operations of the mind mere mechaniſm, dependant on the laws of matter and motion; and as it has been held forth by its votaries, *as in a manner demonſtrated*, I ſhall make ſome remarks on that part of the ſyſtem which relates to the impreſſions made on the nerves and brain in perception.

It may be obſerved in general, that Dr HARTLEY's work conſiſts of a chain of propoſitions, with their proofs and corollaries, digeſted in good order, and in a ſcientific form. A great part of them, however, are, as he candidly acknowledges, conjectures and hints only; yet

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of all our ſenſations being thus eſtabliſhed, it follows, that external objects impreſs vibratory motions on the medullary ſubſtance of the nerves and brain; becauſe no motion, beſides a vibratory one, can reſide in any part for a moment of time.

This is the chain of proof; in which the firſt link is ſtrong, being confirmed by experience; the ſecond is very weak; and the third ſtill weaker. For other kinds of motion, beſides that of vibration, may have ſome continuance, ſuch as rotation, bending or unbending of a ſpring, and perhaps others which we are unacquainted with; nor do we know whether it is motion that is produced in the nerves, it may be preſſure, attraction, repulſion, or ſomething we do not know. This, indeed, is the common refuge of all hypotheſes, that we know no other way in which the phænomena may be produced, and therefore they muſt be produced in this way. There is therefore no proof of vibrations in the infiniteſimal particles of the brain and nerves.

It may be thought that the exiſtence of an elaſtic vibrating æther ſtands on a firmer foundation, having the authority of Sir Isaac Newton. But it ought to be obſerved, that although this great man had formed conjectures about this æther near fifty years before he died, and had it in his eye during that long ſpace as a ſubject of inquiry; yet it does not appear that he ever found

found any convincing proof of its exiſtence, but conſidered it to the laſt as a queſtion, whether there be ſuch an æther or not. In the premonition to the reader, prefixed to the ſecond edition of his Optics, *anno* 1717, he expreſſes himſelf thus with regard to it: "Leſt any one ſhould "think that I place gravity among the eſſential "properties of bodies, I have ſubjoined one que- "ſtion concerning its cauſe; a queſtion, I ſay, "for I do not hold it as a thing eſtabliſhed." If, therefore, we regard the authority of Sir ISAAC NEWTON, we ought to hold the exiſtence of ſuch an æther as a matter not eſtabliſhed by proof, but to be examined into by experiments; and I have never heard that, ſince his time, any new evidence has been found of its exiſtence.

But, ſays Dr HARTLEY, "ſuppoſing the exiſt- "ence of the æther, and of its properties, to be "deſtitute of all direct evidence, ſtill, if it ſerves "to account for a great variety of phænomena, "it will have an indirect evidence in its favour "by this means." There never was an hypotheſis invented by an ingenious man which has not this evidence in its favour. The Vortices of DES CARTES, the Sylphs and Gnomes of Mr POPE, ſerve to account for a great variety of phænomena.

When a man has, with labour and ingenuity, wrought up an hypotheſis into a ſyſtem, he contracts a fondneſs for it, which is apt to warp the

beſt judgment. This, I humbly think, appears remarkably in Dr HARTLEY. In his preface, he declares his approbation of the method of philoſophiſing recommended and followed by Sir ISAAC NEWTON; but having firſt deviated from this method in his practice, he is brought at laſt to juſtify this deviation in theory, and to bring arguments in defence of a method diametrically oppoſite to it. "We admit, ſays he, the "key of a cypher to be a true one, when it ex-"plains the cypher completely." I anſwer, To find the key requires an underſtanding equal or ſuperior to that which made the cypher. This inſtance, therefore, will then be in point, when he who attempts to decypher the works of nature by an hypotheſis, has an underſtanding equal or ſuperior to that which made them. The votaries of hypotheſes have often been challenged to ſhew one uſeful diſcovery in the works of nature that was ever made in that way. If inſtances of this kind could be produced, we ought to conclude, that Lord BACON and Sir ISAAC NEWTON have done great diſſervice to philoſophy, by what they have ſaid againſt hypotheſes. But if no ſuch inſtance can be produced, we muſt conclude, with thoſe great men, that every ſyſtem which pretends to account for the phænomena of nature by hypotheſes or conjecture, is ſpurious and illegitimate, and ſerves only to flat-

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ter the pride of man with a vain conceit of knowledge which he has not attained.

The author tells us, "that any hypotheſis that "has ſo much plauſibility as to explain a "conſiderable number of facts, helps us to digeſt "theſe facts in proper order, to bring new ones "to light, and to make *experimenta crucis* for the "ſake of future inquirers."

Let hypotheſes be put to any of theſe uſes as far as they can ſerve: Let them ſuggeſt experiments, or direct our inquiries; but let juſt induction alone govern our belief.

"The rule of falſe affords an obvious and "ſtrong inſtance of the poſſibility of being led, "with preciſion and certainty, to a true conclu-"ſion from a falſe poſition. And it is of the "very eſſence of algebra, to proceed in the way "of ſuppoſition."

This is true; but, when brought to juſtify the accounting for natural phænomena by hypotheſes, is foreign to the purpoſe. When an unknown number, or any unknown quantity, is ſought, which muſt have certain conditions, it may be found in a ſcientific manner, by the rule of falſe, or by an algebraical analyſis; and, when found, may be ſynthetically demonſtrated to be the number or the quantity ſought, by its anſwering all the conditions required. But it is one thing to find a quantity which ſhall have certain conditions; it is a very different thing

to find out the laws by which it pleaſes GOD to govern the world and produce the phænomena which fall under our obſervation. And we can then only allow ſome weight to this argument in favour of hypotheſes, when it can be ſhewn, that the cauſe of any one phænomenon in nature has been, or can be found, as an unknown quantity is, by the rule of falſe, or by algebraical analyſis. This, I apprehend, will never be, till the æra arrives, which Dr HARTLEY ſeems to foretel, "when future generations ſhall put "all kinds of evidences and inquiries into ma-"thematical forms; and, as it were, reduce "ARISTOTLE's ten Categories, and Biſhop WIL-"KIN's forty *Summa Genera*, to the head of "quantity alone, ſo as to make mathematics, "and logic, natural hiſtory, and civil hiſtory, "natural philoſophy, and philoſophy of all o-"ther kinds, coincide *omni ex parte*."

Since Sir ISAAC NEWTON laid down the rules of philoſophiſing in our inquiries into the works of Nature, many Philoſophers have deviated from them in practice; perhaps few have paid that regard to them which they deſerve. But they have met with very general approbation, as being founded in reaſon, and pointing out the only path to the knowledge of Nature's works. Dr HARTLEY is the only author I have met with, who reaſons againſt them, and has taken pains to find out arguments in defence of the exploded method of hypotheſis.

Another

Another condition which Sir ISAAC NEWTON requires in the cauſes of natural things aſſigned by Philoſophers, is, that they be ſufficient to account for the phænomena. Vibrations and vibratiuncles of the medullary ſubſtance of the nerves and brain, are aſſigned by Dr HARTLEY to account for all our ſenſations and ideas, and, in a word, for all the operations of our minds. Let us conſider very briefly how far they are ſufficient for that purpoſe.

It would be injuſtice to this author to conceive him a Materialiſt. He propoſes his ſentiments with great candour, and they ought not to be carried beyond what his words expreſs. He thinks it a conſequence of his theory, that matter, if it can be endued with the moſt ſimple kinds of ſenſation, might arrive at all that intelligence of which the human mind is poſſeſſed. He thinks that his theory overturns all the arguments that are uſually brought for the immateriality of the ſoul, from the ſubtilty of the internal ſenſes, and of the rational faculty; but he does not take upon him to determine whether matter can be endued with ſenſation or no. He even acknowledges, that matter and motion, however ſubtilly divided and reaſoned upon, yield nothing more than matter and motion ſtill; and therefore he would not be any way interpreted ſo as to oppoſe the immateriality of the ſoul.

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It would, therefore, be unreaſonable to require that his theory of vibrations ſhould, in the proper ſenſe, account for our ſenſations. It would, indeed, be ridiculous in any man to pretend, that thought of any kind muſt neceſſarily reſult from motion, or that vibrations in the nerves muſt neceſſarily produce thought, any more than the vibrations of a pendulum. Dr HARTLEY diſclaims this way of thinking, and therefore it ought not to be imputed to him. All that he pretends is, that, in the human conſtitution, there is a certain connection between vibrations in the medullary ſubſtance of the nerves and brain, and the thoughts of the mind; ſo that the laſt depend entirely upon the firſt, and every kind of thought in the mind ariſes in conſequence of a correſponding vibration, or vibratiuncle in the nerves and brain. Our ſenſations ariſe from vibrations, and our ideas from vibratiuncles, or miniature vibrations; and he comprehends, under theſe two words of *ſenſations* and *ideas*, all the operations of the mind.

But how can we expect any proof of the connection between vibrations and thought, when the exiſtence of ſuch vibrations was never proved. The proof of their connection cannot be ſtronger than the proof of their exiſtence: For, as the author acknowledges, that we cannot infer the exiſtence of the thoughts from the exiſtence of the vibrations, it is no leſs evident, that we

we cannot infer the exiſtence of vibrations from the exiſtence of our thoughts. The exiſtence of both muſt be known before we can know their connection. As to the exiſtence of our thoughts, we have the evidence of conſciouſneſs; a kind of evidence that never was called in queſtion. But as to the exiſtence of vibrations in the medullary ſubſtance of the nerves and brain, no proof has yet been brought.

All therefore we have to expect from this hypotheſis, is, that, in vibrations conſidered abſtractly, there ſhould be a variety in kind and degree, which tallies ſo exactly with the varieties of the thoughts they are to account for, as may lead us to ſuſpect ſome connection between the one and the other. If the diviſions and ſubdiviſions of thought be found to run parallel with the diviſions and ſubdiviſions of vibrations, this would give that kind of plauſibility to the hypotheſis of their connection, which we commonly expect even in a mere hypotheſis; but we do not find even this.

For, to omit all thoſe thoughts and operations which the author comprehends under the name of *ideas*, and which he thinks are connected with vibratiuncles; to omit the perception of external objects, which he comprehends under the name of *ſenſations*; to omit the ſenſations, properly ſo called, which accompany our paſſions and

and affections, and to confine ourſelves to the ſenſations which we have by means of our external ſenſes, we can perceive no correſpondence between the variety we find in their kinds and degrees, and that which may be ſuppoſed in vibrations.

We have five ſenſes, whoſe ſenſations differ totally in kind. By each of theſe, excepting perhaps that of hearing, we have a variety of ſenſations, which differ ſpecifically, and not in degree only. How many taſtes and ſmells are there which are ſpecifically different, each of them capable of all degrees of ſtrength and weakneſs? Heat and cold, roughneſs and ſmoothneſs, hardneſs and ſoftneſs, pain and pleaſure, are ſenſations of touch that differ in kind, and each has an endleſs variety of degrees. Sounds have the qualities of acute and grave, loud and ſoft, with all different degrees of each. The varieties of colour are many more than we have names to expreſs. How ſhall we find varieties in vibrations correſponding to all this variety of ſenſations which we have by our five ſenſes only?

I know two qualities of vibrations in an uniform elaſtic medium, and I know no more. They may be quick or ſlow in various degrees, and they may be ſtrong or weak in various degrees; but I cannot find any diviſion of our ſenſations that will make them tally with thoſe diviſions of vibrations. If we had no other ſenſations

ſations but thoſe of hearing, the theory would anſwer well; for ſounds are either acute or grave, which may anſwer to quick or ſlow vibrations; or they are loud or ſoft, which anſwer to ſtrong or weak vibrations. But then we have no variety of vibrations correſponding to the immenſe variety of ſenſations which we have by ſight, ſmell, taſte, and touch.

Dr HARTLEY has endeavoured to find out other two qualities of vibrations; to wit, that they may primarily affect one part of the brain or another, and that they may vary in their direction, according as they enter by different external nerves; but theſe ſeem to be added to make a number: For, as far as we know, vibrations in an uniform elaſtic ſubſtance, ſpread over the whole, and in all directions. However, that we may be liberal, we ſhall grant him four different kinds of vibrations, each of them having as many degrees as he pleaſes. Can he or any man reduce all our ſenſations to four kinds? We have five ſenſes, and by each of them a variety of ſenſations, more than ſufficient to exhauſt all the varieties we are able to conceive in vibrations.

Dr HARTLEY, indeed, was ſenſible of the difficulty of finding vibrations to ſuit all the variety of our ſenſations. His extenſive knowledge of phyſiology and pathology could yield him but a feeble aid: and therefore he is often reduced

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to the neceſſity of heaping ſuppoſition upon ſuppoſition, conjecture upon conjecture, to give ſome credibility to his hypotheſis; and, in ſeeking out vibrations which may correſpond with the ſenſations of one ſenſe, he ſeems to forget that thoſe muſt be omitted which have been appropriated to another.

Philoſophers have accounted in ſome degree for our various ſenſations of ſound, by the vibrations of elaſtic air. But it is to be obſerved, *firſt*, That we know that ſuch vibrations do really exiſt; and, *ſecondly*, That they tally exactly with the moſt remarkable phænomena of ſound. We cannot, indeed, ſhew how any vibration ſhould produce the ſenſation of ſound. This muſt be reſolved into the will of GOD, or into ſome cauſe altogether unknown. But we know, that as the vibration is ſtrong or weak, the ſound is loud or ſoft. We know, that as the vibration is quick or ſlow, the ſound is acute or grave. We can point out that relation of ſynchronous vibrations which produces harmony or diſcord, and that relation of ſucceſſive vibrations which produces melody: And all this is not conjectured, but proved by a ſufficient induction. This account of ſounds, therefore, is philoſophical; although, perhaps, there may be many things relating to ſound that we cannot account for, and of which the cauſes remain latent. The connections deſcribed in this branch

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of philoſophy are the work of GOD, and not the fancy of men.

If any thing ſimilar to this could be ſhown in accounting for all our ſenſations by vibrations in the medullary ſubſtance of the nerves and brain, it would deſerve a place in ſound philoſophy. But, when we are told of vibrations in a ſubſtance, which no man could ever prove to have vibrations, or to be capable of them; when ſuch imaginary vibrations are brought to account for all our ſenſations, though we can perceive no correſpondence, in their variety of kind and degree, to the variety of ſenſations; the connections deſcribed in ſuch a ſyſtem, are the creatures of human imagination, not the work of GOD.

The rays of light make an impreſſion upon the optic nerves; but they make none upon the auditory or olfactory. The vibrations of the air make an impreſſion upon the auditory nerves; but none upon the optic or the olfactory. The effluvia of bodies make an impreſſion upon the olfactory nerves; but make none upon the optic or auditory. No man has been able to give a ſhadow of reaſon for this. While this is the caſe, is it not better to confeſs our ignorance of the nature of thoſe impreſſions made upon the nerves and brain in perception, than to flatter our pride with the conceit of knowledge which we have not, and to adulterate philoſophy with the ſpurious brood of hypotheſes?

CHAP.

CHAP. IV.

False Concluſions drawn from the Impreſſions before mentioned.

SOME Philoſophers among the ancients, as well as among the moderns, imagined that man is nothing but a piece of matter ſo curiouſly organized, that the impreſſions of external objects produce in it ſenſation, perception, remembrance, and all the other operations we are conſcious of. This fooliſh opinion could only take its riſe from obſerving the conſtant connection which the Author of Nature hath eſtabliſhed between certain impreſſions made upon our ſenſes, and our perception of the objects by which the impreſſion is made; from which they weakly inferred, that thoſe impreſſions were the proper efficient cauſes of the correſponding perception.

But no reaſoning is more fallacious than this, that becauſe two things are always conjoined, therefore one muſt be the cauſe of the other. Day and night have been joined in a conſtant ſucceſſion ſince the beginning of the world; but who is ſo fooliſh as to conclude from this, that day is the cauſe of night, or night the cauſe of the following day? There is indeed nothing more ridiculous than to imagine that any motion

tion or modification of matter ſhould produce thought.

If one ſhould tell of a teleſcope ſo exactly made as to have the power of ſeeing; of a whiſpering gallery that had the power of hearing; of a cabinet ſo nicely framed as to have the power of memory; or of a machine ſo delicate as to feel pain when it was touched; ſuch abſurdities are ſo ſhocking to common ſenſe that they would not find belief even among ſavages; yet it is the ſame abſurdity to think, that the impreſſions of external objects upon the machine of our bodies, can be the real efficient cauſe of thought and perception.

Paſſing this therefore as a notion too abſurd to admit of reaſoning; another concluſion very generally made by Philoſophers, is, that in perception an impreſſion is made upon the mind as well as upon the organ, nerves and brain. ARISTOTLE, as was before obſerved, thought that the form or image of the object perceived, enters by the organ of ſenſe, and ſtrikes upon the mind. Mr HUME gives the name of impreſſions to all our perceptions, to all our ſenſations, and even to the objects which we perceive. Mr LOCKE affirms very poſitively, that the ideas of external objects are produced in our minds by impulſe, "that being the only way we can "conceive bodies to operate in." It ought, however, to be obſerved, in juſtice to Mr LOCKE,

that he retracted this notion in his firſt letter to the Biſhop of WORCESTER, and promiſed, in the next edition of his Eſſay to have that paſſage rectified; but either from forgetfulneſs in the author, or negligence in the printer, the paſſage remains in all the ſubſequent editions I have ſeen.

There is no prejudice more natural to man, than to conceive of the mind as having ſome ſimilitude to body in its operations. Hence, men have been prone to imagine, that as bodies are put in motion by ſome impulſe or impreſſion made upon them by contiguous bodies; ſo the mind is made to think and to perceive by ſome impreſſion made upon it, or ſome impulſe given to it by contiguous objects. If we have ſuch a notion of the mind as HOMER had of his gods, who might be bruiſed or wounded with ſwords and ſpears, we may then underſtand what is meant by impreſſions made upon it by a body: But if we conceive the mind to be immaterial, of which I think we have very ſtrong proofs, we ſhall find it difficult to affix a meaning to *impreſſions made upon it.*

There is a figurative meaning of impreſſions on the mind which is well authoriſed, and of which we took notice in the obſervations made on that word; but this meaning applies only to objects that are intereſting. To ſay that an object which I ſee with perfect indifference makes an

an impreſſion upon my mind, is not, as I apprehend, good Engliſh. If Philoſophers mean no more but that I ſee the object, why ſhould they invent an improper phraſe to expreſs what every man knows how to expreſs in plain Engliſh?

But it is evident, from the manner in which this phraſe is uſed by modern Philoſophers, that they mean not barely to expreſs by it, my perceiving an object, but to explain the manner of perception. They think that the object perceived acts upon the mind, in ſome way ſimilar to that in which one body acts upon another, by making an impreſſion upon it. The impreſſion upon the mind is conceived to be ſomething wherein the mind is altogether paſſive, and has ſome effect produced in it by the object. But this is a hypotheſis which contradicts the common ſenſe of mankind, and which ought not to be admitted without proof.

When I look upon the wall of my room, the wall does not act at all, nor is capable of acting; the perceiving it is an act or operation in me. That this is the common apprehenſion of mankind with regard to perception, is evident from the manner of expreſſing it in all languages.

The vulgar give themſelves no trouble how they perceive objects, they expreſs what they are conſcious of, and they expreſs it with propriety; but Philoſophers have an avidity to know how we perceive objects; and conceiving

ſome ſimilitude between a body that is put in motion, and a mind that is made to perceive, they are led to think, that as the body muſt receive ſome impulſe to make it move, ſo the mind muſt receive ſome impulſe or impreſſion to make it perceive. This analogy ſeems to be confirmed, by obſerving that we perceive objects only when they make ſome impreſſion upon the organs of ſenſe, and upon the nerves and brain; but it ought to be obſerved, that ſuch is the nature of body that it cannot change its ſtate, but by ſome force impreſſed upon it. This is not the nature of mind. All that we know about it ſhows it to be in its nature living and active, and to have the power of perception in its conſtitution, but ſtill within thoſe limits to which it is confined by the laws of Nature.

It appears, therefore, that this phraſe of the mind's having impreſſions made upon it by corporeal objects in perception, is either a phraſe without any diſtinct meaning, and contrary to the propriety of the Engliſh language, or it is grounded upon an hypotheſis which is deſtitute of proof. On that account, though we grant that in perception there is an impreſſion made upon the organ of ſenſe, and upon the nerves and brain, we do not admit that the object makes any impreſſion upon the mind.

There is another concluſion drawn from the impreſſions made upon the brain in perception, which

which I conceive to have no ſolid foundation, though it has been adopted very generally by Philoſophers. It is, that by the impreſſions made on the brain, images are formed of the object perceived; and that the mind, being ſeated in the brain as its chamber of preſence, immediately perceives thoſe images only, and has no perception of the external object but by them. This notion of our perceiving external objects, not immediately, but in certain images or ſpecies of them conveyed by the ſenſes, ſeems to be the moſt ancient philoſophical hypotheſis we have on the ſubject of perception, and to have, with ſmall variations, retained its authority to this day.

ARISTOTLE, as was before obſerved, maintained, that the ſpecies, images, or forms of external objects, coming from the object, are impreſſed on the mind. The followers of DEMOCRITUS and EPICURUS held the ſame thing, with regard to ſlender films of ſubtile matter coming from the object, that ARISTOTLE did with regard to his immaterial ſpecies or forms.

ARISTOTLE thought, that every object of human underſtanding enters at firſt by the ſenſes; and that the notions got by them are by the powers of the mind refined and ſpiritualized, ſo as at laſt to become objects of the moſt ſublime and abſtracted ſciences. PLATO, on the other hand, had a very mean opinion of all the knowledge

we get by the ſenſes. He thought it did not deſerve the name of knowledge, and could not be the foundation of ſcience; becauſe the objects of ſenſe are individuals only, and are in a conſtant fluctuation. All ſcience, according to him, muſt be employed about thoſe eternal and immutable ideas, which exiſted before the objects of ſenſe, and are not liable to any change. In this there was an eſſential difference between the ſyſtems of theſe two Philoſophers. The notion of eternal and immutable ideas, which PLATO borrowed from the Pythagorean ſchool, was totally rejected by ARISTOTLE, who held it as a maxim, that there is nothing in the intellect, which was not at firſt in the ſenſes.

But, notwithſtanding this great difference in thoſe two ancient ſyſtems, they might both agree as to the manner in which we perceive objects by our ſenſes: And that they did ſo, I think, is probable; becauſe ARISTOTLE, as far as I know, neither takes notice of any difference between himſelf and his maſter upon this point, nor lays claim to his theory of the manner of our perceiving objects as his own invention. It is ſtill more probable from the hints which PLATO gives in the ſeventh book of his Republic, concerning the manner in which we perceive the objects of ſenſe; which he compares to perſons in a deep and dark cave, who ſee not external objects themſelves,

but

but only their ſhadows, by a light let into the cave through a ſmall opening.

It ſeems, therefore, probable, that the Pythagoreans and Platoniſts agreed with the Peripatetics in this general theory of perception; to wit, that the objects of ſenſe are perceived only by certain images, or ſhadows of them, let into the mind, as into a *camera obſcura*.

The notions of the ancients were very various with regard to the ſeat of the ſoul. Since it has been diſcovered, by the improvements in anatomy, that the nerves are the inſtruments of perception, and of the ſenſations accompanying it, and that the nerves ultimately terminate in the brain, it has been the general opinion of Philoſophers that the brain is the ſeat of the ſoul; and that ſhe perceives the images that are brought there, and external things only by means of them.

DES CARTES, obſerving that the pineal gland is the only part of the brain that is ſingle, all the other parts being double, and thinking that the ſoul muſt have one ſeat, was determined by this to make that gland the ſoul's habitation, to which, by means of the animal ſpirits, intelligence is brought of all objects that affect the ſenſes.

Others have not thought proper to confine the habitation of the ſoul to the pineal gland, but to the brain in general, or to ſome part of it, which they call the *ſenſorium*. Even the great

NEWTON favoured this opinion, though he propoſes it only as a query, with that modeſty which diſtinguiſhed him no leſs than his great genius. "Is not, ſays he, the ſenſorium of animals the "place where the ſentient ſubſtance is preſent, "and to which the ſenſible ſpecies of things are "brought through the nerves and brain, that "there they may be perceived by the mind pre-"ſent in that place? And is there not an incor-"poreal, living, intelligent, and omnipreſent "Being, who, in infinite ſpace, as if it were in "his ſenſorium, intimately perceives things "themſelves, and comprehends them perfectly, "as being preſent to them; of which things, "that principle in us, which perceives and "thinks, diſcerns only, in its little ſenſorium, "the images brought to it through the organs "of the ſenſes?"

His friend Dr SAMUEL CLARKE, adopted the ſame ſentiment with more confidence. In his papers to LEIBNITZ, we find the following paſſages: "Without being preſent to the ima-"ges of the things perceived, it (the ſoul) could "not poſſibly perceive them. A living ſubſtance "can only there perceive where it is preſent, "either to the things themſelves, (as the omni-"preſent GOD is to the whole univerſe), or to "the images of things, (as the ſoul of man is in "its proper ſenſory). Nothing can any more "act, or be acted upon, where it is not preſent,

"than

" than it can be where it is not. We are ſure " the ſoul cannot perceive what it is not preſent " to, becauſe nothing can act, or be acted upon, " where it is not."

Mr LOCKE expreſſes himſelf ſo upon this point, that for the moſt part, one would imagine, that he thought that the ideas, or images of things, which he believed to be the immediate objects of perception, are impreſſions upon the mind itſelf; yet, in ſome paſſages, he rather places them in the brain, and makes them to be perceived by the mind there preſent. " There are ſome ideas, " ſays he, which have admittance only through " one ſenſe; and if the organs or the nerves, " which are the conduits to convey them from " without to their audience in the brain, the " mind's preſence-room, if I may ſo call it, are " ſo diſordered as not to perform their function, " they have no poſtern to be admitted by.

" There ſeems to be a conſtant decay of all " our ideas, even of thoſe that are ſtruck deep- " eſt. The pictures drawn in our minds are " laid in fading colours. Whether the temper " of the brain makes this difference, that in " ſome it retains the characters drawn on it " like marble, in others like free-ſtone, and in " others little better than ſand, I ſhall not en- " quire."

From theſe paſſages of Mr LOCKE, and others of a like nature, it is plain, that he thought that there

there are images of external objects conveyed to the brain. But whether he thought with DES CARTES and NEWTON, that the images in the brain are perceived by the mind there preſent, or that they are imprinted on the mind itſelf, is not ſo evident.

Now, with regard to this hypotheſis, there are three things that deſerve to be conſidered, becauſe the hypotheſis leans upon them; and, if any one of them fail, it muſt fall to the ground. The *firſt* is, That the ſoul has its ſeat, or, as Mr LOCKE calls it, its preſence-room, in the brain. The *ſecond*, That there are images formed in the brain of all the objects of ſenſe. The *third*, That the mind or ſoul perceives theſe images in the brain; and that it perceives not external objects immediately, but only by means of their images.

As to the *firſt* point, That the ſoul has its ſeat in the brain, this, ſurely, is not ſo well eſtabiſhed, as that we can ſafely build other principles upon it. There have been various opinions and much diſputation about the place of ſpirits; whether they have a place? and if they have, how they occupy that place? After men had fought in the dark about theſe points for ages, the wiſer part ſeem to have left off diſputing about them, as matters beyond the reach of the human faculties.

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As to the *ſecond* point, That images of all the objects of ſenſe are formed in the brain, we may venture to affirm, that there is no proof nor probability of this, with regard to any of the objects of ſenſe; and that with regard to the greater part of them, it is words without any meaning.

We have not the leaſt evidence that the image of any external object is formed in the brain. The brain has been diſſected times innumerable by the niceſt Anatomiſts; every part of it examined by the naked eye, and with the help of microſcopes; but no veſtige of an image of any external object was ever found. The brain ſeems to be the moſt improper ſubſtance that can be imagined for receiving or retaining images, being a ſoft moiſt medullary ſubſtance.

But how are theſe images formed? or whence do they come? Says Mr LOCKE, the organs of ſenſe and nerves convey them from without. This is juſt the Ariſtotelian hypotheſis of ſenſible ſpecies, which modern Philoſophers have been at great pains to refute, and which muſt be acknowledged to be one of the moſt unintelligible parts of the Peripatetic ſyſtem. Thoſe who conſider ſpecies of colour, figure, ſound, and ſmell, coming from the object, and entering by the organs of ſenſe, as a part of the ſcholaſtic jargon, long ago diſcarded from ſound philoſophy,

phy, ought to have diſcarded images in the brain along with them. There never was a ſhadow of argument brought by any author, to ſhow that an image of any external object ever entered by any of the organs of ſenſe.

That external objects make ſome impreſſion on the organs of ſenſe, and by them on the nerves and brain, is granted; but that thoſe impreſſions reſemble the objects they are made by, ſo as that they may be called images of the objects, is moſt improbable. Every hypotheſis that has been contrived ſhews that there can be no ſuch reſemblance; for neither the motions of animal ſpirits, nor the vibrations of elaſtic chords, or of elaſtic æther, or of the infinitefimal particles of the nerves, can be ſuppoſed to reſemble the objects by which they are excited.

We know, that, in viſion, an image of the viſible object is formed in the bottom of the eye by the rays of light. But we know alſo, that this image cannot be conveyed to the brain, becauſe the optic nerve, and all the parts that ſurround it, are opaque and impervious to the rays of light; and there is no other organ of ſenſe in which any image of the object is formed.

It is farther to be obſerved, that, with regard to ſome objects of ſenſe, we may underſtand what is meant by an image of them imprinted on the brain; but, with regard to moſt objects of ſenſe, the phraſe is abſolutely unintelligible, and conveys

veys no meaning at all. As to objects of ſight, I underſtand what is meant by an image of their figure in the brain: But how ſhall we conceive an image of their colour where there is abſolute darkneſs? And as to all other objects of ſenſe, except figure and colour, I am unable to conceive what is meant by an image of them. Let any man ſay, what he means by an image of heat and cold, an image of hardneſs or ſoftneſs, an image of ſound, of ſmell, or taſte. The word *image*, when applied to theſe objects of ſenſe, has abſolutely no meaning. Upon what a weak foundation, then, does this hypotheſis ſtand, when it ſuppoſes, that images of all the objects of ſenſe are imprinted on the brain, being conveyed thither by the conduits of the organs and nerves.

The *third* point in this hypotheſis, is, That the mind perceives the images in the brain, and external objects only by means of them. This is as improbable, as that there are ſuch images to be perceived. If our powers of perception be not altogether fallacious, the objects we perceive are not in our brain, but without us. We are ſo far from perceiving images in the brain, that we do not perceive our brain at all; nor would any man ever have known that he had a brain, if anatomy had not diſcovered, by diſſection, that the brain is a conſtituent part of the human body.

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ſome ſimilitude between a body that is put in motion, and a mind that is made to perceive, they are led to think, that as the body muſt receive ſome impulſe to make it move, ſo the mind muſt receive ſome impulſe or impreſſion to make it perceive. This analogy ſeems to be confirmed, by obſerving that we perceive objects only when they make ſome impreſſion upon the organs of ſenſe, and upon the nerves and brain; but it ought to be obſerved, that ſuch is the nature of body that it cannot change its ſtate, but by ſome force impreſſed upon it. This is not the nature of mind. All that we know about it ſhows it to be in its nature living and active, and to have the power of perception in its conſtitution, but ſtill within thoſe limits to which it is confined by the laws of Nature.

It appears, therefore, that this phraſe of the mind's having impreſſions made upon it by corporeal objects in perception, is either a phraſe without any diſtinct meaning, and contrary to the propriety of the Engliſh language, or it is grounded upon an hypotheſis which is deſtitute of proof. On that account, though we grant that in perception there is an impreſſion made upon the organ of ſenſe, and upon the nerves and brain, we do not admit that the object makes any impreſſion upon the mind.

There is another concluſion drawn from the impreſſions made upon the brain in perception, which

which I conceive to have no ſolid foundation, though it has been adopted very generally by Philoſophers. It is, that by the impreſſions made on the brain, images are formed of the object perceived; and that the mind, being ſeated in the brain as its chamber of preſence, immediately perceives thoſe images only, and has no perception of the external object but by them. This notion of our perceiving external objects, not immediately, but in certain images or ſpecies of them conveyed by the ſenſes, ſeems to be the moſt ancient philoſophical hypotheſis we have on the ſubject of perception, and to have, with ſmall variations, retained its authority to this day.

ARISTOTLE, as was before obſerved, maintained, that the ſpecies, images, or forms of external objects, coming from the object, are impreſſed on the mind. The followers of DEMOCRITUS and EPICURUS held the ſame thing, with regard to ſlender films of ſubtile matter coming from the object, that ARISTOTLE did with regard to his immaterial ſpecies or forms.

ARISTOTLE thought, that every object of human underſtanding enters at firſt by the ſenſes; and that the notions got by them are by the powers of the mind refined and ſpiritualized, ſo as at laſt to become objects of the moſt ſublime and abſtracted ſciences. PLATO, on the other hand, had a very mean opinion of all the knowledge

while they are recent and freſh in our memory. It is neceſſary that, by employing ourſelves frequently in this way, we get the habit of this attention and reflection; and therefore, for the proof of facts which I ſhall have occaſion to mention upon this ſubject, I can only appeal to the reader's own thoughts, whether ſuch facts are not agreeable to what he is conſcious of in his own mind.

If, therefore, we attend to that act of our mind which we call the perception of an external object of ſenſe, we ſhall find in it theſe three things. *Firſt*, Some conception or notion of the object perceived. *Secondly*, A ſtrong and irreſiſtible conviction and belief of its preſent exiſtence. And, *thirdly*, That this conviction and belief are immediate, and not the effect of reaſoning.

Firſt, It is impoſſible to perceive an object without having ſome notion or conception of that which we perceive. We may indeed conceive an object which we do not perceive; but when we perceive the object, we muſt have ſome conception of it at the ſame time; and we have commonly a more clear and ſteady notion of the object while we perceive it, than we have from memory or imagination when it is not perceived. Yet, even in perception, the notion which our ſenſes give of the object may be more or

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leſs clear, more or leſs diſtinct, in all poſſible degrees.

Thus we ſee more diſtinctly an object at a ſmall than at a great diſtance. An object at a great diſtance is ſeen more diſtinctly in a clear than in a foggy day. An object ſeen indiſtinctly with the naked eye, on account of its ſmallneſs, may be ſeen diſtinctly with a microſcope. The objects in this room will be ſeen by a perſon in the room leſs and leſs diſtinctly as the light of the day fails; they paſs through all the various degrees of diſtinctneſs according to the degrees of the light, and at laſt, in total darkneſs, they are not ſeen at all. What has been ſaid of the objects of ſight is ſo eaſily applied to the objects of the other ſenſes, that the application may be left to the reader.

In a matter ſo obvious to every perſon capable of reflection, it is neceſſary only farther to obſerve, that the notion which we get of an object, merely by our external ſenſe, ought not to be confounded with that more ſcientific notion which a man, come to the years of underſtanding, may have of the ſame object, by attending to its various attributes, or to its various parts, and their relation to each other, and to the whole. Thus the notion which a child has of a jack for roaſting meat, will be acknowledged to be very different from that of a man who underſtands its conſtruction, and perceives the relation of the

parts to one another, and to the whole. The child ſees the jack and every part of it as well as the man: The child, therefore, has all the notion of it which ſight gives; whatever there is more in the notion which the man forms of it, muſt be derived from other powers of the mind, which may afterwards be explained. This obſervation is made here only, that we may not confound the operations of different powers of the mind, which, by being always conjoined after we grow up to underſtanding, are apt to paſs for one and the ſame.

Secondly, In perception we not only have a notion more or leſs diſtinct of the object perceived, but alſo an irreſiſtible conviction and belief of its exiſtence. This is always the caſe when we are certain that we perceive it. There may be a perception ſo faint and indiſtinct, as to leave us in doubt whether we perceive the object or not. Thus, when a ſtar begins to twinkle as the light of the ſun withdraws, one may, for a ſhort time, think he ſees it, without being certain, until the perception acquires ſome ſtrength and ſteadineſs. When a ſhip juſt begins to appear in the utmoſt verge of the horizon, we may at firſt be dubious whether we perceive it or not: But when the perception is in any degree clear and ſteady, there remains no doubt of its reality; and when the reality of the perception is aſcertained,

tained, the exiſtence of the object perceived can no longer be doubted.

By the laws of all nations, in the moſt ſolemn judicial trials wherein mens fortunes and lives are at ſtake, the ſentence paſſes according to the teſtimony of eye or ear witneſſes of good credit. An upright judge will give a fair hearing to every objection that can be made to the integrity of a witneſs, and allow it to be poſſible that he may be corrupted; but no judge will ever ſuppoſe, that witneſſes may be impoſed upon by truſting to their eyes and ears: And if a ſceptical counſel ſhould plead againſt the teſtimony of the witneſſes, that they had no other evidence for what they declared, but the teſtimony of their eyes and ears, and that we ought not to put ſo much faith in our ſenſes, as to deprive men of life or fortune upon their teſtimony; ſurely no upright judge would admit a plea of this kind. I believe no counſel, however ſceptical, ever dared to offer ſuch an argument; and, if it was offered, it would be rejected with diſdain.

Can any ſtronger proof be given, that it is the univerſal judgment of mankind that the evidence of ſenſe is a kind of evidence which we may ſecurely reſt upon in the moſt momentous concerns of mankind: That it is a kind of evidence againſt which we ought not to admit any reaſoning; and therefore, that to reaſon either for or againſt it, is an inſult to common ſenſe?

The whole conduct of mankind, in the daily occurrences of life, as well as the ſolemn procedure of judicatories in the trial of cauſes civil and criminal, demonſtrates this. I know only of two exceptions that may be offered againſt this being the univerſal belief of mankind.

The firſt exception is that of ſome lunatics, who have been perſuaded of things that ſeem to contradict the clear teſtimony of their ſenſes. It is ſaid there have been lunatics and hypochondriacal perſons, who ſeriouſly believed themſelves to be made of glaſs; and, in conſequence of this, lived in continual terror of having their brittle frame ſhivered into pieces.

All I have to ſay to this is, that our minds, in our preſent ſtate, are, as well as our bodies, liable to ſtrange diſorders; and as we do not judge of the natural conſtitution of the body, from the diſorders or diſeaſes to which it is ſubject from accidents, ſo neither ought we to judge of the natural powers of the mind from its diſorders, but from its ſound ſtate. It is natural to man, and common to the ſpecies, to have two hands and two feet; yet I have ſeen a man, and a very ingenious one, who was born without either hands or feet. It is natural to man to have faculties ſuperior to thoſe of brutes; yet we ſee ſome individuals, whoſe faculties are not equal to thoſe of many brutes; and the wiſeſt man may, by various accidents, be reduced to this

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ſtate. General rules that regard thoſe whoſe intellects are ſound, are not overthrown by inſtances of men whoſe intellects are hurt by any conſtitutional or accidental diſorder.

The other exception that may be made to the principle we have laid down, is that of ſome Philoſophers who have maintained, that the teſtimony of ſenſe is fallacious, and therefore ought never to be truſted. Perhaps it might be a ſufficient anſwer to this to ſay, that there is nothing ſo abſurd which ſome Philoſophers have not maintained. It is one thing to profeſs a doctrine of this kind, another ſeriouſly to believe it, and to be governed by it in the conduct of life. It is evident, that a man who did not believe his ſenſes, could not keep out of harm's way an hour of his life; yet, in all the hiſtory of philoſophy, we never read of any ſceptic that ever ſtepped into fire or water becauſe he did not believe his ſenſes, or that ſhewed, in the conduct of life, leſs truſt in his ſenſes than other men have. This gives us juſt ground to apprehend, that philoſophy was never able to conquer that natural belief which men have in their ſenſes; and that all their ſubtile reaſonings againſt this belief were never able to perſuade themſelves.

It appears, therefore, that the clear and diſtinct teſtimony of our ſenſes carries irreſiſtible conviction along with it, to every man in his right judgment.

I obſerved, *thirdly*, That this conviction is not only irreſiſtible, but it is immediate; that is, it is not by a train of reaſoning and argumentation that we come to be convinced of the exiſtence of what we perceive; we aſk no argument for the exiſtence of the object, but that we perceive it; perception commands our belief upon its own authority, and diſdains to reſt its authority upon any reaſoning whatſoever.

The conviction of a truth may be irreſiſtible, and yet not immediate. Thus, my conviction that the three angles of every plain triangle are equal to two right angles, is irreſiſtible, but it is not immediate: I am convinced of it by demonſtrative reaſoning. There are other truths in mathematics of which we have not only an irreſtible, but an immediate conviction. Such are the axioms. Our belief of the axioms in mathematics is not grounded upon argument. Arguments are grounded upon them, but their evidence is diſcerned immediately by the human underſtanding.

It is, no doubt, one thing to have an immediate conviction of a ſelf-evident axiom; it is another thing to have an immediate conviction of the exiſtence of what we ſee: But the conviction is equally immediate and equally irreſiſtible in both caſes. No man thinks of ſeeking a reaſon to believe what he ſees; and, before we are capable of reaſoning, we put no leſs confi-

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fidence in our ſenſes than after. The rudeſt ſavage is as fully convinced of what he ſees, and hears, and feels, as the moſt expert logician. The conſtitution of our underſtanding determines us to hold the truth of a mathematical axiom as a firſt principle, from which other truths may be deduced, but it is deduced from none; and the conſtitution of our power of perception determines us to hold the exiſtence of what we diſtinctly perceive as a firſt principle, from which other truths may be deduced, but it is deduced from none. What has been ſaid of the irreſiſtible and immediate belief of the exiſtence of objects diſtinctly perceived, I mean only to affirm with regard to perſons ſo far advanced in underſtanding, as to diſtinguiſh objects of mere imagination from things which have a real exiſtence. Every man knows that he may have a notion of Don Quixote or of Garagantua, without any belief that ſuch perſons ever exiſted; and that of Julius Cæſar and of Oliver Cromwell, he has not only a notion, but a belief that they did really exiſt. But whether children, from the time that they begin to uſe their ſenſes, make a diſtinction between things which are only conceived or imagined, and things which really exiſt, may be doubted. Until we are able to make this diſtinction, we cannot properly be ſaid to believe or to diſbelieve the exiſtence of any thing. The belief of the exiſtence

of any thing ſeems to ſuppoſe a notion of exiſtence; a notion too abſtract, perhaps, to enter into the mind of an infant. I ſpeak of the power of perception in thoſe that are adult, and of a ſound mind, who believe that there are ſome things which do really exiſt; and that there are many things conceived by themſelves, and by others, which have no exiſtence. That ſuch perſons do invariably aſcribe exiſtence to every thing which they diſtinctly perceive, without ſeeking reaſons or arguments for doing ſo, is perfectly evident from the whole tenor of human life.

The account I have given of our perception of external objects, is intended as a faithful delineation of what every man, come to years of underſtanding, and capable of giving attention to what paſſes in his own mind, may feel in himſelf. In what manner the notion of external objects, and the immediate belief of their exiſtence, is produced by means of our ſenſes, I am not able to ſhew, and I do not pretend to ſhew. If the power of perceiving external objects in certain circumſtances, be a part of the original conſtitution of the human mind, all attempts to account for it will be vain: No other account can be given of the conſtitution of things, but the will of Him that made them. As we can give no reaſon why matter is extended and inert, why the mind thinks, and is conſcious of its thoughts, but the will of Him who made both;

both; ſo I ſuſpect we can give no other reaſon why, in certain circumſtances, we perceive external objects, and in others do not.

The Supreme Being intended, that we ſhould have ſuch knowledge of the material objects that ſurround us, as is neceſſary in order to our ſupplying the wants of nature, and avoiding the dangers to which we are conſtantly expoſed; and he has admirably fitted our powers of perception to this purpoſe. If the intelligence we have of external objects were to be got by reaſoning only, the greateſt part of men would be deſtitute of it; for the greateſt part of men hardly ever learn to reaſon; and in infancy and childhood no man can reaſon: Therefore, as this intelligence of the objects that ſurround us, and from which we may receive ſo much benefit or harm, is equally neceſſary to children and to men, to the ignorant and to the learned, God in his wiſdom conveys it to us in a way that puts all upon a level. The information of the ſenſes is as perfect, and gives as full conviction to the moſt ignorant, as to the moſt learned.

CHAP.

CHAP. VI.

What it is to account for a Phænomenon in Nature.

AN object placed at a proper diſtance, and in a good light, while the eyes are ſhut, is not perceived at all; but no ſooner do we open our eyes upon it, than we have, as it were by inſpiration, a certain knowledge of its exiſtence, of its colour, figure, and diſtance. This is a fact which every one knows. The vulgar are ſatisfied with knowing the fact, and give themſelves no trouble about the cauſe of it: But a Philoſopher is impatient to know how this event is produced, to account for it, or aſſign its cauſe.

This avidity to know the cauſes of things is the parent of all philoſophy true and falſe. Men of ſpeculation place a great part of their happineſs in ſuch knowledge. *Felix qui potuit rerum cognoſcere cauſas*, has always been a ſentiment of human nature. But as, in the purſuit of other kinds of happineſs, men often miſtake the road; ſo in none have they more frequently done it, than in the philoſophical purſuit of the cauſes of things.

It

It is a dictate of common ſenſe, that the cauſes we aſſign of appearances ought to be real, and not fictions of human imagination. It is likewiſe ſelf-evident, that ſuch cauſes ought to be adequate to the effects that are conceived to be produced by them.

That thoſe who are leſs accuſtomed to inquiries into the cauſes of natural appearances, may the better underſtand what it is to ſhew the cauſe of ſuch appearances, or to account for them; I ſhall borrow a plain inſtance of a phænomenon or appearance, of which a full and ſatisfactory account has been given. The phænomenon is this: That a ſtone, or any heavy body, falling from a height, continually increaſes its velocity as it deſcends; ſo that if it acquire a certain velocity in one ſecond of time, it will have twice that velocity at the end of two ſeconds, thrice at the end of three ſeconds, and ſo on in proportion to the time. This accelerated velocity in a ſtone falling muſt have been obſerved from the beginning of the world; but the firſt perſon, as far as we know, who accounted for it in a proper and philoſophical manner, was the famous GALILEO; after innumerable falſe and fictitious accounts had been given of it.

He obſerved, that bodies once put in motion continue that motion with the ſame velocity, and in the ſame direction, until they be ſtopped

or

or retarded, or have the direction of their motion altered, by ſome force impreſſed upon them. This property of bodies is called their *inertia*, or inactivity; for it implies no more than that bodies cannot of themſelves change their ſtate from reſt to motion, or from motion to reſt. He obſerved alſo, that gravity acts conſtantly and equally upon a body, and therefore will give equal degrees of velocity to a body in equal times. From theſe principles, which are known from experience to be fixed laws of Nature, GALILEO ſhewed, that heavy bodies muſt deſcend with a velocity uniformly accelerated, as by experience they are found to do.

For if the body by its gravitation acquire a certain velocity at the end of one ſecond, it would, though its gravitation ſhould ceaſe that moment, continue to go on with that velocity; but its gravitation continues, and will in another ſecond give it an additional velocity, equal to that which it gave in the firſt; ſo that the whole velocity at the end of two ſeconds will be twice as great as at the end of one. In like manner, this velocity being continued through the third ſecond, and having the ſame addition by gravitation as in any of the preceding, the whole velocity at the end of the third ſecond will be thrice as great as at the end of the firſt, and ſo on continually.

We

We may here obſerve, that the cauſes aſſigned of this phænomenon are two: *Firſt*, That bodies once put in motion retain their velocity and their direction until it is changed by ſome force impreſſed upon them. *Secondly*, That the weight or gravitation of a body is always the ſame. Theſe are laws of Nature, confirmed by univerſal experience, and therefore are not feigned but true cauſes; then, they are preciſely adequate to the effect aſcribed to them; they muſt neceſſarily produce that very motion in deſcending bodies which we find to take place; and neither more nor leſs. The account therefore given of this phænomenon is juſt and philoſophical; no other will ever be required or admitted by thoſe who underſtand this.

It ought likewiſe to be obſerved, that the cauſes aſſigned of this phænomenon are things of which we can aſſign no cauſe. Why bodies once put in motion continue to move; why bodies conſtantly gravitate towards the earth with the ſame force, no man has been able to ſhow: Theſe are facts confirmed by univerſal experience, and they muſt no doubt have a cauſe; but their cauſe is unknown, and we call them laws of Nature, becauſe we know no cauſe of them but the will of the Supreme Being.

But may we not attempt to find the cauſe of gravitation, and of other phænomena which we call laws of Nature? No doubt we may. We know

know not the limit which has been ſet to human knowledge, and our knowledge of the works of God can never be carried too far: But, ſuppoſing gravitation to be accounted for, by an æthereal elaſtic medium for inſtance, this can only be done, *firſt*, by proving the exiſtence and the elaſticity of this medium; and, *ſecondly*, by ſhowing, that this medium muſt neceſſarily produce that gravitation which bodies are known to have. Until this be done, gravitation is not accounted for, nor is its cauſe known; and when this is done, the elaſticity of this medium will be conſidered as a law of Nature, whoſe cauſe is unknown. The chain of natural cauſes has, not unfitly, been compared to a chain hanging down from heaven: A link that is diſcovered ſupports the links below it, but it muſt itſelf be ſupported; and that which ſupports it muſt be ſupported, until we come to the firſt link, which is ſupported by the throne of the Almighty. Every natural cauſe muſt have a cauſe, until we aſcend to the firſt cauſe, which is uncauſed, and operates not by neceſſity but by will.

By what has been ſaid in this Chapter, thoſe who are but little acquainted with philoſophical inquiries may ſee what is meant by accounting for a phænomenon, or ſhowing its cauſe, which ought to be well underſtood, in order to judge of the theories by which Philoſophers have

have attempted to account for our perception of external objects by the ſenſes.

CHAP. VII.

Sentiments of Philoſophers about the Perception of external Objects; and, firſt,

Of the Theory of Father MALEBRANCHE.

HOW the correſpondence is carried on between the thinking principle within us, and the material world without us, has always been found a very difficult problem to thoſe Philoſophers who think themſelves obliged to account for every phænomenon in nature. Many Philoſophers, ancient and modern, have employed their invention to diſcover how we are made to perceive external objects by our ſenſes: And there appears to be a very great uniformity in their ſentiments in the main, notwithſtanding their variations in particular points.

PLATO illuſtrates our manner of perceiving the objects of ſenſe, in this manner: He ſuppoſes a dark ſubterraneous cave, in which men lie bound in ſuch a manner, that they can direct their eyes only to one part of the cave: Far behind, there is a light, ſome rays of which come over a wall to that part of the cave which is

is before the eyes of our priſoners. A number of perſons, variouſly employed, paſs between them and the light, whoſe ſhadows are ſeen by the priſoners, but not the perſons themſelves.

In this manner, that Philoſopher conceived, that, by our ſenſes, we perceive the ſhadows of things only, and not things themſelves. He ſeems to have borrowed his notions on this ſubject from the Pythagoreans, and they very probably from PYTHAGORAS himſelf. If we make allowance for PLATO's allegorical genius, his ſentiments on this ſubject correſpond very well with thoſe of his ſcholar ARISTOTLE, and of the Peripatetics. The ſhadows of PLATO may very well repreſent the ſpecies and phantaſms of the Peripatetic ſchool, and the ideas and impreſſions of modern Philoſophers.

Two thouſand years after PLATO, Mr LOCKE, who ſtudied the operations of the human mind ſo much, and with ſo great ſucceſs, repreſents our manner of perceiving external objects, by a ſimilitude very much reſembling that of the cave. "Methinks, ſays he, the underſtanding is not "much unlike a cloſet wholly ſhut from light, "with only ſome little opening left, to let in "external viſible reſemblances or ideas of things "without. Would the pictures coming into "ſuch a dark room but ſtay there, and lie ſo "orderly as to be found upon occaſion, it would "very much reſemble the underſtanding of a "man,

" man, in reference to all objects of ſight, and " the ideas of them."

PLATO's ſubterranean cave, and Mr LOCKE's dark cloſet, may be applied with eaſe to all the ſyſtems of perception that have been invented: For they all ſuppoſe that we perceive not external objects immediately, and that the immediate objects of perception are only certain ſhadows of the external objects. Thoſe ſhadows or images, which we immediately perceive, were by the ancients called *ſpecies*, *forms*, *phantaſms*. Since the time of DES CARTES, they have commonly been called *ideas*, and by Mr HUME *impreſſions*. But all Philoſophers, from PLATO to Mr HUME, agree in this, That we do not perceive external objects immediately, and that the immediate object of perception muſt be ſome image preſent to the mind. So far there appears an unanimity, rarely to be found among Philoſophers on ſuch abſtruſe points.

If it ſhould be aſked, Whether, according to the opinion of Philoſophers, we perceive the images or ideas only, and infer the exiſtence and qualities of the external object from what we perceive in the image? Or, whether we really perceive the external object as well as its image? The anſwer to this queſtion is not quite obvious.

On the one hand, Philoſophers, if we except BERKELEY and HUME, believe the exiſtence of external objects of ſenſe, and call them objects of

perception, though not immediate objects. But what they mean by a mediate object of perception I do not find clearly explained; whether they ſuit their language to popular opinion, and mean that we perceive external objects in that figurative ſenſe, in which we ſay that we perceive an abſent friend when we look on his picture; or whether they mean, that really, and without a figure, we perceive both the external object and its idea in the mind. If the laſt be their meaning, it would follow, that, in every inſtance of perception, there is a double object perceived: That I perceive, for inſtance, one ſun in the heavens, and another in my own mind. But I do not find that they affirm this; and as it contradicts the experience of all mankind, I will not impute it to them.

It ſeems, therefore, that their opinion is, That we do not really perceive the external object, but the internal only; and that when they ſpeak of perceiving external objects, they mean it only in a popular or in a figurative ſenſe, as above explained. Several reaſons lead me to think this to be the opinion of Philoſophers, beſide what is mentioned above. *Firſt*, If we do really perceive the external object itſelf, there ſeems to be no neceſſity, no uſe, for an image of it. *Secondly*, Since the time of DES CARTES, Philoſophers have very generally thought that the exiſtence of

of external objects of ſenſe requires proof, and can only be proved from the exiſtence of their ideas. *Thirdly*, The way in which Philoſophers ſpeak of ideas, ſeems to imply that they are the only objects of perception.

Having endeavoured to explain what is common to Philoſophers in accounting for our perception of external objects, we ſhall give ſome detail of their differences.

The ideas by which we perceive external objects, are ſaid by ſome to be the ideas of the Deity; but it has been more generally thought, that every man's ideas are proper to himſelf, and are either in his mind, or in his *ſenſorium*, where the mind is immediately preſent. The *firſt* is the theory of MALEBRANCHE; the *ſecond* we ſhall call the common theory.

With regard to that of MALEBRANCHE, it ſeems to have ſome affinity with the Platonic notion of ideas, but is not the ſame. PLATO believed that there are three eternal firſt principles, from which all things have their origin; matter, ideas, and an efficient cauſe. Matter is that of which all things are made, which, by all the ancient Philoſophers, was conceived to be eternal. Ideas are forms without matter of every kind of things which can exiſt; which forms were alſo conceived by PLATO to be eternal and immutable, and to be the models or patterns by which the efficient cauſe, that is the Deity, form-

ed every part of this Univerſe. Theſe ideas were conceived to be the ſole objects of ſcience, and indeed of all true knowledge. While we are impriſoned in the body, we are prone to give attention to the objects of ſenſe only; but theſe being individual things, and in a conſtant fluctuation, being indeed ſhadows rather than realities, cannot be the object of real knowledge. All ſcience is employed, not about individual things, but about things univerſal and abſtract from matter. Truth is eternal and immutable, and therefore muſt have for its object eternal and immutable ideas; theſe we are capable of contemplating in ſome degree even in our preſent ſtate, but not without a certain purification of mind, and abſtraction from the objects of ſenſe. Such, as far as I am able to comprehend, were the ſublime notions of PLATO, and probably of PYTHAGORAS.

The Philoſophers of the Alexandrian ſchool, commonly called the latter Platoniſts, ſeem to have adopted the ſame ſyſtem; but with this difference, that they made the eternal ideas not to be a principle diſtinct from the Deity, but to be in the divine intellect, as the objects of thoſe conceptions which the divine mind muſt from all eternity have had, not only of every thing which he has made, but of every poſſible exiſtence, and of all the relations of things: By a proper purification and abſtraction from the objects of ſenſe, we may be in ſome meaſure united to the Deity,

Deity, and in the eternal light be enabled to diſcern the moſt ſublime intellectual truths.

Theſe Platonic notions, grafted upon Chriſtianity, probably gave riſe to the ſect called *Myſtics*, which, though in its ſpirit and principles extremely oppoſite to the Peripatetic, yet was never extinguiſhed, but ſubſiſts to this day.

Many of the Fathers of the Chriſtian church have a tincture of the tenets of the Alexandrian ſchool; among others St AUGUSTINE. But it does not appear, as far as I know, that either PLATO, or the latter Platoniſts, or St AUGUSTINE, or the Myſtics, thought that we perceive the objects of ſenſe in the divine ideas. They had too mean a notion of our perception of ſenſible objects to aſcribe to it ſo high an origin. This theory, therefore, of our perceiving the objects of ſenſe in the ideas of the Deity, I take to be the invention of Father MALEBRANCHE himſelf. He indeed brings many paſſages of St AUGUSTINE to countenance it, and ſeems very deſirous to have that Father of his party. But in thoſe paſſages, though the Father ſpeaks in a very high ſtrain of God's being the light of our minds, of our being illuminated immediately by the eternal light, and uſes other ſimilar expreſſions; yet he ſeems to apply thoſe expreſſions only to our illumination in moral and divine things, and not to the perception of objects by the ſenſes. Mr BAYLE imagines that ſome traces of this opinion of MALEBRANCHE are to be found in AMELIUS

the Platoniſt, and even in DEMOCRITUS; but his authorities ſeem to be ſtrained.

MALEBRANCHE, with a very penetrating genius, entered into a more minute examination of the powers of the human mind than any one before him. He had the advantage of the diſcoveries made by DES CARTES, whom he followed without ſlaviſh attachment.

He lays it down as a principle admitted by all Philoſophers, and which could not be called in queſtion, that we do not perceive external objects immediately, but by means of images or ideas of them preſent to the mind. "I ſuppoſe, "ſays he, that every one will grant that we per- "ceive not the objects that are without us im- "mediately, and of themſelves. We ſee the "ſun, the ſtars, and an infinity of objects with- "out us; and it is not at all likely that the "ſoul ſallies out of the body, and, as it were, "take a walk through the heavens to contem- "plate all thoſe objects: She ſees them not, "therefore, by themſelves; and the immediate "object of the mind, when it ſees the ſun, for "example, is not the ſun, but ſomething which "is intimately united to the ſoul; and it is that "which I call an idea: So that by the word "*idea*, I underſtand nothing elſe here but that "which is the immediate object, or neareſt to "the mind, when we perceive any object. It "ought to be carefully obſerved, that, in order

"to

" to the mind's perceiving any object, it is ab-
" ſolutely neceſſary that the idea of that object
" be actually preſent to it. Of this it is not poſ-
" ſible to doubt. The things which the ſoul
" perceives are of two kinds. They are either
" in the ſoul, or they are without the ſoul:
" Thoſe that are in the ſoul are its own thoughts,
" that is to ſay, all its different modifications.
" The ſoul has no need of ideas for perceiving
" theſe things. But with regard to things with-
" out the ſoul, we cannot perceive them but by
" means of ideas."

Having laid this foundation, as a principle which was common to all Philoſophers, and which admitted of no doubt, he proceeds to enumerate all the poſſible ways by which the ideas of ſenſible objects may be preſented to the mind: Either, *firſt*, they come from the bodies which we perceive; or, *ſecondly*, the ſoul has the power of producing them in itſelf; or, *thirdly*, they are produced by the Deity, either in our creation, or occaſionally as there is uſe for them; or, *fourthly*, the ſoul has in itſelf virtually and eminently, as the ſchools ſpeak, all the perfections, which it perceives in bodies; or, *fifthly*, the ſoul is united with a being poſſeſſed of all perfection, who has in himſelf the ideas of all created things.

This he takes to be a complete enumeration of all the poſſible ways in which the ideas of external objects may be preſented to our minds:

He employs a whole chapter upon each; refuting the four firſt, and confirming the laſt by various arguments. The Deity, being always preſent to our minds in a more intimate manner than any other being, may, upon occaſion of the impreſſions made on our bodies, diſcover to us, as far as he thinks proper, and according to fixed laws, his own ideas of the object; and thus we ſee all things in GOD, or in the divine ideas.

However viſionary this ſyſtem may appear on a ſuperficial view, yet when we conſider, that he agreed with the whole tribe of Philoſophers in conceiving ideas to be the immediate objects of perception, and that he found inſuperable difficulties, and even abſurdities, in every other hypotheſis concerning them, it will not appear ſo wonderful that a man of very great genius ſhould fall into this; and probably it pleaſed ſo devout a man the more, that it ſets, in the moſt ſtriking light, our dependence upon GOD, and his continual preſence with us.

He diſtinguiſhed, more accurately than any Philoſopher had done before, the objects which we perceive from the ſenſations in our own minds, which, by the laws of Nature, always accompany the perception of the object. As in many things, ſo particularly in this, he has great merit: For this, I apprehend, is a key that opens the way to a right underſtanding both of our external ſenſes, and of other powers of the

the mind. The vulgar confound ſenſation with other powers of the mind, and with their objects, becauſe the purpoſes of life do not make a diſtinction neceſſary. The confounding of theſe in common language has led Philoſophers, in one period, to make thoſe things external which really are ſenſations in our own minds; and, in another period, running, as is uſual, into the contrary extreme, to make almoſt every thing to be a ſenſation or feeling in our minds.

It is obvious, that the ſyſtem of MALEBRANCHE leaves no evidence of the exiſtence of a material world, from what we perceive by our ſenſes; for the divine ideas, which are the objects immediately perceived, were the ſame before the world was created. MALEBRANCHE was too acute not to diſcern this conſequence of his ſyſtem, and too candid not to acknowledge it: He fairly owns it, and endeavours to make advantage of it, reſting the complete evidence we have of the exiſtence of matter upon the authority of revelation: He ſhews, that the arguments brought by DES CARTES to prove the exiſtence of a material world, though as good as any that reaſon could furniſh, are not perfectly concluſive; and though he acknowledges, with DES CARTES, that we feel a ſtrong propenſity to believe the exiſtence of a material world, yet he thinks this is not ſufficient; and that to yield to ſuch propenſities without evidence, is to

expoſe

expoſe ourſelves to perpetual deluſion. He thinks, therefore, that the only convincing evidence we have of the exiſtence of a material world is, that we are aſſured by revelation that GOD created the heavens and the earth, and that the Word was made fleſh: He is ſenſible of the ridicule to which ſo ſtrange an opinion may expoſe him among thoſe who are guided by prejudice; but, for the ſake of truth, he is willing to bear it. But no author, not even Biſhop BERKELY, hath ſhown more clearly, that, either upon his own ſyſtem, or upon the common principles of Philoſophers with regard to ideas, we have no evidence left, either from reaſon or from our ſenſes, of the exiſtence of a material world. It is no more than juſtice to Father MALEBRANCHE to acknowledge, that Biſhop BERKELEY's arguments are to be found in him in their whole force.

Mr NORRIS, an Engliſh divine, eſpouſed the ſyſtem of MALEBRANCHE, in his Eſſay towards the Theory of the Ideal or Intellectual World, publiſhed in two volumes 8*vo*, *anno* 1701. This author has made a feeble effort to ſupply a defect which is to be found not in MALEBRANCHE only, but in almoſt all the authors who have treated of ideas; I mean, to prove their exiſtence. He has employed a whole chapter to prove, that material things cannot be an immediate object of perception. His arguments are theſe: 1*ſt*, They

They are without the mind, and therefore there can be no union between the object and the percipient. *2dly*, They are diſproportioned to the mind, and removed from it by the whole diameter of being. *3dly*, Becauſe, if material objects were immediate objects of perception, there could be no phyſical ſcience; things neceſſary and immutable being the only objects of ſcience. *4thly*, If material things were perceived by themſelves, they would be a true light to our minds, as being the intelligible form of our underſtandings, and conſequently perfective of them, and indeed ſuperior to them.

MALEBRANCHE's ſyſtem was adopted by many devout people in France of both ſexes; but it ſeems to have had no great currency in other countries. Mr LOCKE wrote a ſmall tract againſt it, which is found among his poſthumous works: But whether it was written in haſte, or after the vigour of his underſtanding was impaired by age, there is leſs of ſtrength and ſolidity in it, than in moſt of his writings. The moſt formidable antagoniſt MALEBRANCHE met with was in his own country; ANTONY ARNAULD, doctor of the Sorbonne, and one of the acuteſt writers the Janſeniſts have to boaſt of, though that ſect has produced many. Thoſe who chooſe to ſee this ſyſtem, attacked on the one hand, and defended on the other, with ſubtilty of argument, and elegance of expreſſion, and

and on the part of ARNAULD with much wit and humour, may find ſatisfaction by reading MALEBRANCHE's Inquiry after Truth; ARNAULD's book of True and Falſe Ideas; MALEBRANCHE's Defence; and ſome ſubſequent replies and defences. In controverſies of this kind, the aſſailant commonly has the advantage, if they are not unequally matched; for it is eaſier to overturn all the theories of Philoſophers upon this ſubject, than to defend any one of them. Mr BAYLE makes a very juſt remark upon this controverſy, that the arguments of Mr ARNAULD againſt the ſyſtem of MALEBRANCHE were often unanſwerable, but they were capable of being retorted againſt his own ſyſtem; and his ingenious antagoniſt knew well how to uſe this defence.

CHAP. VIII.

Of the common Theory of Perception, and of the Sentiments of the PERIPATETICS, *and of* DES CARTES.

THIS theory in general is, that we perceive external objects only by certain images which are in our minds, or in the ſenſorium to which the mind is immediately preſent. Philoſophers, in different ages, have differed both in the

the names they have given to thoſe images, and in their notions concerning them. It would be a laborious taſk to enumerate all their variations, and perhaps would not requite the labour. I ſhall only give a ſketch of the principal differences with regard to their names and their nature.

By ARISTOTLE and the Peripatetics, the images preſented to our ſenſes were called *ſenſible ſpecies or forms;* thoſe preſented to the memory or imagination were called *phantaſms;* and thoſe preſented to the intellect were called *intelligible ſpecies;* and they thought, that there can be no perception, no imagination, no intellection, without ſpecies or phantaſms. What the ancient Philoſophers called ſpecies, ſenſible and intelligible, and phantaſms, in later times, and eſpecially ſince the time of DES CARTES, came to be called by the common name of *ideas.* The Carteſians divided our ideas into three claſſes, thoſe of *ſenſation,* of *imagination,* and of *pure intellection.* Of the objects of ſenſation and imagination, they thought the images are in the brain, but of objects that are incorporeal, the images are in the underſtanding, or pure intellect.

Mr LOCKE, taking the word *idea* in the ſame ſenſe as DES CARTES had done before him, to ſignify whatever is meant by phantaſm, notion or ſpecies, divides ideas into thoſe of *ſenſation,* and

and thoſe of *reflection*; meaning by the firſt, the ideas of all corporeal objects, whether perceived, remembered, or imagined; by the ſecond, the ideas of the powers and operations of our minds. What Mr LOCKE calls ideas, Mr HUME divides into two diſtinct kinds, *impreſſions* and *ideas*. The difference betwixt theſe, he ſays, conſiſts in the degrees of force and livelineſs with which they ſtrike upon the mind. Under *impreſſions* he comprehends all our ſenſations, paſſions and emotions, as they make their firſt appearance in the ſoul. By *ideas* he means the faint images of theſe in thinking and reaſoning.

Dr HARTLEY gives the ſame meaning to ideas as Mr HUME does, and what Mr HUME calls impreſſions he calls ſenſations; conceiving our ſenſations to be occaſioned by vibrations of the infiniteſimal particles of the brain, and ideas by miniature vibrations, or vibratiuncles. Such differences we find among Philoſophers, with regard to the name of thoſe internal images of objects of ſenſe, which they hold to be the immediate objects of perception.

We ſhall next give a ſhort detail of the ſentiments of the Peripatetics and Carteſians, of LOCKE, BERKELEY, and HUME, concerning them.

ARISTOTLE ſeems to have thought that the ſoul conſiſts of two parts, or, rather, that we have two ſouls, the animal and the rational; or, as he calls them, the ſoul and the intellect. To the *firſt*, belong the ſenſes, memory, and imagination;

nation; to the *laſt*, judgment opinion, belief, and reaſoning. The firſt we have in common with brute animals; the laſt is peculiar to man. The animal ſoul he held to be a certain form of the body, which is inſeparable from it, and periſhes at death. To this ſoul the ſenſes belong: And he defines a ſenſe to be that which is capable of receiving the ſenſible forms, or ſpecies of objects, without any of the matter of them; as wax receives the form of the ſeal without any of the matter of it. The forms of ſound, of colour, of taſte, and of other ſenſible qualities, are in like manner received by the ſenſes.

It ſeems to be a neceſſary conſequence of ARISTOTLE's doctrine, that bodies are conſtantly ſending forth, in all directions, as many different kinds of forms without matter as they have different ſenſible qualities; for the forms of colour muſt enter by the eye, the forms of ſound by the ear, and ſo of the other ſenſes. This accordingly was maintained by the followers of ARISTOTLE, though, not as far as I know, expreſsly mentioned by himſelf. They diſputed concerning the nature of thoſe forms, or ſpecies, whether they were real beings or non-entities; and ſome held them to be of an intermediate nature between the two. The whole doctrine of the Peripatetics and ſchoolmen concerning forms, ſubſtantial and accidental, and

concerning

concerning the tranſmiſſion of ſenſible ſpecies from objects of ſenſe to the mind, if it be at all intelligible, is ſo far above my comprehenſion, that I ſhould perhaps do it injuſtice, by entering into it more minutely. MALEBRANCHE, in his *Recherche de la Verité*, has employed a chapter to ſhew, that material objects do not ſend forth ſenſible ſpecies of their ſeveral ſenſible qualities.

The great revolution which DES CARTES produced in philoſophy, was the effect of a ſuperiority of genius, aided by the circumſtances of the times. Men had, for more than a thouſand years, looked up to ARISTOTLE as an oracle in philoſophy. His authority was the teſt of truth. The ſmall remains of the Platonic ſyſtem were confined to a few Myſtics, whoſe principles and manner of life drew little attention. The feeble attempts of RAMUS, and of ſome others, to make improvements in the ſyſtem, had little effect. The Peripatetic doctrines were ſo interwoven with the whole ſyſtem of ſcholaſtic theology, that to diſſent from ARISTOTLE was to alarm the Church. The moſt uſeful and intelligible parts, even of ARISTOTLE's writings, were neglected, and philoſophy was become an art of ſpeaking learnedly, and diſputing ſubtilely, without producing any invention of uſe in human life. It was fruitful of words, but barren of works, and admirably contrived for drawing a veil over human ignorance,

rance, and putting a ſtop to the progreſs of knowledge, by filling men with a conceit that they knew every thing. It was very fruitful alſo in controverſies; but for the moſt part they were controverſies about words, or about things of no moment, or things above the reach of the human faculties: And the iſſue of them was what might be expected, that the contending parties fought, without gaining or loſing an inch of ground, till they were weary of the diſpute, or their attention was called off to ſome other ſubject.

Such was the philoſophy of the ſchools of Europe, during many ages of darkneſs and barbariſm that ſucceeded the decline of the Roman empire; ſo that there was great need of a reformation in philoſophy as well as in religion. The light began to dawn at laſt; a ſpirit of inquiry ſprang up, and men got the courage to doubt of the dogmas of ARISTOTLE, as well as of the decrees of Popes. The moſt important ſtep in the reformation of religion was to deſtroy the claim of infallibility, which hindered men from uſing their judgment in matters of religion: And the moſt important ſtep in the reformation of philoſophy was to deſtroy the authority, of which ARISTOTLE had ſo long had peaceable poſſeſſion. The laſt had been attempted by Lord BACON and others, with

no leſs zeal than the firſt by LUTHER and CALVIN.

DES CARTES knew well the defects of the prevailing ſyſtem, which had begun to loſe its authority. His genius enabled him, and his ſpirit prompted him, to attempt a new one. He had applied much to the mathematical ſciences, and had made conſiderable improvement in them. He wiſhed to introduce that perſpecuity and evidence into other branches of philoſophy which he found in them.

Being ſenſible how apt we are to be led aſtray by prejudices of education, he thought the only way to avoid error, was, to reſolve to doubt of every thing, and hold every thing to be uncertain; even thoſe things which he had been taught to hold as moſt certain, until he had ſuch clear and cogent evidence as compelled his aſſent.

In this ſtate of univerſal doubt, that which firſt appeared to him to be clear and certain, was his own exiſtence. Of this he was certain, becauſe he was conſcious that he thought, that he reaſoned, and that he doubted. He uſed this argument, therefore, to prove his own exiſtence, *Cogito, ergo ſum.* This he conceived to be the firſt of all truths, the foundation-ſtone upon which the whole fabric of human knowledge is built, and on which it muſt reſt. And as ARCHIMEDES thought, that if he had one fixed point

point to reſt his engines upon, he could move the earth; ſo DES CARTES, charmed with the diſcovery of one certain principle, by which he emerged from the ſtate of univerſal doubt, believed that this principle alone would be a ſufficient foundation on which he might build the whole ſyſtem of ſcience. He ſeems therefore to have taken no great trouble to examine whether there might not be other firſt principles, which, on account of their own light and evidence, ought to be admitted by every man of ſound judgment. The love of ſimplicity, ſo natural to the mind of man, led him to apply the whole force of his mind to raiſe the fabric of knowledge upon this one principle, rather than ſeek a broader foundation.

Accordingly, he does not admit the evidence of ſenſe to be a firſt principle, as he does that of conſciouſneſs. The arguments of the ancient ſceptics here occurred to him; that our ſenſes often deceive us, and therefore ought never to be truſted on their own authority; that, in ſleep, we often ſeem to ſee and hear things which we are convinced to have had no exiſtence. But that which chiefly led DES CARTES to think that he ought not to truſt to his ſenſes without proof of their veracity, was, that he took it for granted, as all Philoſophers had done before him, that he did not perceive external objects themſelves, but certain images of them

in his own mind, called *ideas*. He was certain, by conſciouſneſs, that he had the ideas of ſun and moon, earth and ſea; but how could he be aſſured that there really exiſted external objects like to theſe ideas?

Hitherto he was uncertain of every thing but of his own exiſtence, and the exiſtence of the operations and ideas of his own mind. Some of his diſciples, it is ſaid, remained at this ſtage of his ſyſtem, and got the name of Egoiſts. They could not find evidence in the ſubſequent ſtages of his progreſs. But DES CARTES reſolved not to ſtop here; he endeavoured to prove, by a new argument, drawn from his idea of a Deity, the exiſtence of an infinitely perfect Being, who made him, and all his faculties. From the perfection of this Being, he inferred that he could be no deceiver; and therefore concluded, that his ſenſes, and the other faculties he found in himſelf, are not fallacious, but may be truſted, when a proper uſe is made of them.

The ſyſtem of DES CARTES is, with great perſpicuity and acuteneſs, explained by himſelf in his writings, which ought to be conſulted by thoſe who would underſtand it.

The merit of DES CARTES cannot be eaſily conceived by thoſe who have not ſome notion of the Peripatetic ſyſtem, in which he was educated. To throw off the prejudices of education, and to create a ſyſtem of nature, totally different

different from that which had ſubdued the underſtanding of mankind, and kept it in ſubjection for ſo many centuries, required an uncommon force of mind.

The world which DES CARTES exhibits to our view, is not only in its ſtructure very different from that of the Peripatetics, but is, as we may ſay, compoſed of different materials.

In the old ſyſtem, every thing was, by a kind of metaphyſical ſublimation, reſolved into principles ſo myſterious, that it may be a queſtion, whether they were words without meaning, or were notions too refined for human underſtanding.

All that we obſerve in nature, is, according to ARISTOTLE, a conſtant ſucceſſion of the operations of generation and corruption. The principles of generation are matter and form. The principle of corruption is privation. All natural things are produced or generated by the union of matter and form; matter being, as it were, the mother, and form the father. As to matter, or the firſt matter, as it is called, it is neither ſubſtance nor accident; it has no quality or property; it is nothing actually, but every thing potentially. It has ſo ſtrong an appetite for form, that it is no ſooner diveſted of one form, than it is clothed with another, and is equally ſuſceptible of all forms ſucceſſively. It

has no nature, but only the capacity of having any one.

This is the account which the Peripatetics give of the firſt matter. The other principle of generation is *form*, *act*, *perfection*; for theſe three words ſignify the ſame thing. But we muſt not conceive form to conſiſt in the figure, ſize, arrangement, or motion, of the parts of matter. Theſe, indeed, are accidental forms, by which things artificial are formed: But every production of Nature has a ſubſtantial form, which, joined to matter, makes it to be what it is. The ſubſtantial form is a kind of informing ſoul, which gives the thing its ſpecific nature, and all its qualities, powers, and activity. Thus the ſubſtantial form of heavy bodies, is that which makes them deſcend; of light bodies, that which makes them aſcend. The ſubſtantial form of gold, is that which gives it its ductility, its fuſibility, its weight, its colour, and all its qualities; and the ſame is to be underſtood of every natural production. A change in the accidental form of any body, is alteration only; but a change in the ſubſtantial form, is generation and corruption: It is corruption with reſpect to the ſubſtantial form of which the body is deprived: It is generation with reſpect to the ſubſtantial form that ſucceeds. Thus, when a horſe dies and turns to duſt, the philoſophical account of the phænomenon is this: A certain portion

portion of the *materiâ prima*, which was joined to the ſubſtantial form of a horſe, is deprived of it by privation, and in the ſame inſtant is inveſted with the ſubſtantial form of earth. As every ſubſtance muſt have a ſubſtantial form, there are ſome of thoſe forms inanimate, ſome vegetative, ſome animal, and ſome rational. The three former kinds can only ſubſiſt in matter; but the laſt, according to the ſchoolmen, is immediately created by GOD, and infuſed into the body, making one ſubſtance with it, while they are united; yet capable of being disjoined from the body, and of ſubſiſting by itſelf.

Such are the principles of natural things in the Peripatetic ſyſtem. It retains ſo much of the ancient Pythagorean doctrine, that we cannot aſcribe the invention of it ſolely to ARISTOTLE, although he no doubt made conſiderable alterations in it. The firſt matter was probably the ſame in both ſyſtems, and was in both held to be eternal. They differed more about form. The Pythagoreans and Platoniſts held forms, or ideas, as they called them, to be eternal, immutable, and ſelf-exiſtent. ARISTOTLE maintained, that they were not eternal, nor ſelf-exiſtent. On the other hand, he did not allow them to be produced, but educed from matter; yet he held them not to be actually in the matter from which they are educed, but potentially only. But theſe two ſyſtems differed leſs from one

another, than that of DES CARTES did from both.

In the world of DES CARTES, we meet with two kinds of beings only, to wit, body and mind; the firſt the object of our ſenſes, the other of conſciouſneſs; both of them things of which we have a diſtinct apprehenſion, if the human mind be capable of diſtinct apprehenſion at all. To the firſt, no qualities are aſcribed but extenſion, figure, and motion; to the laſt, nothing but thought, and its various modifications, of which we are conſcious. He could obſerve no common attribute, no reſembling feature in the attributes of body and mind, and therefore concluded them to be diſtinct ſubſtances, and totally of a different nature; and that body, from its very nature, is inanimate and inert, incapable of any kind of thought or ſenſation, or of producing any change or alteration in itſelf.

DES CARTES muſt be allowed the honour of being the firſt who drew a diſtinct line between the material and intellectual world, which, in all the old ſyſtems, were ſo blended together, that it was impoſſible to ſay where the one ends and the other begins. How much this diſtinction hath contributed to the improvements of modern times, in the philoſophy both of body and of mind, is not eaſy to ſay.

One

One obvious conſequence of this diſtinction was, that accurate reflection on the operations of our own mind, is the only way to make any progreſs in the knowledge of it. MALEBRANCHE, LOCKE, BERKELEY, and HUME, were taught this leſſon by DES CARTES; and to it we owe their moſt valuable diſcoveries in this branch of philoſophy. The analogical way of reaſoning concerning the powers of the mind from the properties of body, which is the ſource of almoſt all the errors on this ſubject, and which is ſo natural to the bulk of mankind, was as contrary to the principles of DES CARTES, as it was agreeable to the principles of the old philoſophy. We may therefore truly ſay, that, in that part of philoſophy which relates to the mind, DES CARTES laid the foundation, and put us into that track, which all wiſe men now acknowledge to be the only one in which we can expect ſucceſs.

With regard to phyſics, or the philoſophy of body, if DES CARTES had not the merit of leading men into the right tract, we muſt allow him that of bringing them out of a wrong one. The Peripatetics, by aſſigning to every ſpecies of body a particular ſubſtantial form, which produces, in an unknown manner, all the effects we obſerve in it, put a ſtop to all improvement in this branch of philoſophy. Gravity and levity, fluidity and hardneſs, heat and cold, were qualities

ariſing

ariſing from the ſubſtantial form of the bodies to which they belonged. Generation and corruption, ſubſtantial forms, and occult qualities, were always at hand, to reſolve every phænomenon. This philoſophy, therefore, inſtead of accounting for any of the phænomena of Nature, contrived only to give learned names to their unknown cauſes, and fed men with the huſks of barbarous terms, inſtead of the fruit of real knowledge.

By the ſpreading of the Carteſian ſyſtem, *materia prima*, ſubſtantial forms, and occult qualities, with all the jargon of the Ariſtotelian phyſics, fell into utter diſgrace, and were never mentioned by the followers of the new ſyſtem, but as a ſubject of ridicule. Men became ſenſible that their underſtanding had been hoodwinked by thoſe hard terms. They were now accuſtomed to explain the phænomena of Nature, by the figure, ſize, and motion of the particles of matter, things perfectly level to human underſtanding, and could reliſh nothing in philoſophy that was dark and unintelligible. ARISTOTLE, after a reign of more than a thouſand years, was now expoſed as an object of deriſion even to the vulgar, arrayed in the mock majeſty of his ſubſtantial forms and occult qualities. The Ladies became fond of a philoſophy which was eaſily learned, and required no words too harſh for their delicate organs. Queens and Princeſſes,

Princeſſes, the moſt diſtinguiſhed perſonages of the age, courted the converſation of DES CARTES, and became adepts in his philoſophy. Witneſs CHRISTINA Queen of Sweden, and ELISABETH, daughter of FREDERICK King of Bohemia, and ſiſter to SOPHIA the mother of our Royal Family. The laſt, though very young when DES CARTES wrote his *Principia*, he declares to be the only perſon he knew, who perfectly underſtood not only all his philoſophical writings, but the moſt abſtruſe of his mathematical works.

That men ſhould ruſh with violence from one extreme, without going more or leſs into the contrary extreme, is not to be expected from the weakneſs of human nature. DES CARTES and his followers were not exempted from this weakneſs; they thought that extenſion, figure, and motion, were ſufficient to reſolve all the phænomena of the material ſyſtem. To admit other qualities, whoſe cauſe is unknown, was to return to Egypt, from which they had been ſo happily delivered.

When Sir ISAAC NEWTON's doctrine of Gravitation was publiſhed, the great objection to it, which hindered its general reception in Europe for half a century, was, that gravitation ſeemed to be an occult quality, as it could not be accounted for by extenſion, figure, and motion, the known attributes of body. They who defended

fended him, found it difficult to anſwer this objection, to the ſatisfaction of thoſe who had been initiated in the principles of the Carteſian ſyſtem. But, by degrees, men came to be ſenſible, that, in revolting from ARISTOTLE, the Carteſians had gone into the oppoſite extreme; experience convinced them, that there are qualities in the material world, whoſe exiſtence is certain, though their cauſe be occult. To acknowledge this, is only a candid confeſſion of human ignorance, than which there is nothing more becoming a Philoſopher.

As all that we can know of the mind muſt be derived from a careful obſervation of its operations in ourſelves; ſo all that we can know of the material ſyſtem muſt be derived from what can be diſcovered by our ſenſes. DES CARTES was not ignorant of this; nor was his ſyſtem ſo unfriendly to obſervation and experiment as the old ſyſtem was. He made many experiments, and called earneſtly upon all lovers of truth to aid him in this way. But, believing that all the phænomena of the material world are the reſult of extenſion, figure, and motion, and that the Deity always combines theſe, ſo as to produce the phænomena in the ſimpleſt manner poſſible, he thought, that, from a few experiments, he might be able to diſcover the ſimpleſt way, in which the obvious phænomena of Nature can be produced, by matter and motion only;

only; and that this muſt be the way in which they are actually produced. His conjectures were ingenious, upon the principles he had adopted: But they are found to be ſo far from the truth, that they ought for ever to diſcourage Philoſophers from truſting to conjecture in the operations of Nature.

The vortices or whirlpools of ſubtile matter, by which DES CARTES endeavoured to account for the phænomena of the material world, are now found to be fictions, no leſs than the ſenſible ſpecies of ARISTOTLE.

It was reſerved for Sir ISAAC NEWTON to point out clearly the road to the knowledge of Nature's works. Taught by Lord BACON to deſpiſe hypotheſes as the fictions of human fancy, he laid it down as a rule of philoſophiſing, that no cauſes of natural things ought to be aſſigned but ſuch as can be proved to have a real exiſtence. He ſaw, that all the length men can go in accounting for phænomena, is to diſcover the laws of Nature, according to which they are produced; and therefore, that the true method of philoſophiſing is this: From real facts aſcertained by obſervation and experiment, to collect by juſt induction the laws of Nature, and to apply the laws ſo diſcovered, to account for the phænomena of Nature.

Thus the natural Philoſopher has the rules of his art fixed with no leſs preciſion than the Mathematician,

thematician, and may be no leſs certain when he keeps within them, and when he deviates from them: And though the evidence of a law of nature from induction is not demonſtrative, it is the only kind of evidence on which all the moſt important affairs of human life muſt reſt.

Purſuing this road without deviation, NEWTON diſcovered the laws of our planetary ſyſtem, and of the rays of light; and gave the firſt and the nobleſt examples of that chaſte induction, which Lord BACON could only delineate in theory.

How ſtrange is it, that the human mind ſhould have wandered for ſo many ages, without falling into this tract! How much more ſtrange, that after it has been clearly diſcovered, and a happy progreſs made in it, many chooſe rather to wander in the fairy regions of hypotheſis!

To return to DES CARTES's notions of the manner of our perceiving external objects, from which a concern to do juſtice to the merits of that great reformer in philoſophy has led me to degreſs, he took it for granted, as the old Philoſophers had done, that what we immediately perceive muſt be either in the mind itſelf, or in the brain, to which the mind is immediately preſent. The impreſſions made upon our organs, nerves, and brain, could be nothing, according to his philoſophy, but various modifications of extenſion, figure and motion. There could be nothing

nothing in the brain like ſound or colour, taſte or ſmell, heat or cold; theſe are ſenſations in the mind, which, by the laws of the union of ſoul and body, are raiſed on occaſion of certain traces in the brain; and although he gives the name of ideas to thoſe traces in the brain, he does not think it neceſſary that they ſhould be perfectly like to the things which they repreſent, any more than that words or ſigns ſhould reſemble the things they ſignify. But, ſays he, that we may follow the received opinion as far as is poſſible, we may allow a ſlight reſemblance. Thus we know, that a print in a book may repreſent houſes, temples, and groves; and ſo far is it from being neceſſary that the print ſhould be perfectly like the thing it repreſents, that its perfection often requires the contrary: For a circle muſt often be repreſented by an ellipſe, a ſquare by a rhombus, and ſo of other things.

The perceptions of ſenſe, he thought, are to be referred ſolely to the union of ſoul and body. They commonly exhibit to us only what may hurt or profit our bodies; and rarely, and by accident only, exhibit things as they are in themſelves. It is by obſerving this, that we muſt learn to throw off the prejudices of ſenſe, and to attend with our intellect to the ideas which are by nature implanted in it. By this means we ſhall underſtand, that the nature of matter does not conſiſt in thoſe things that affect our ſenſes, ſuch

ſuch as colour, or ſmell, or taſte; but only in this, that it is ſomething extended in length, breadth, and depth.

The writings of DES CARTES have in general a remarkable degree of perſpicuity; and he undoubtly intended that, in this particular, his philoſophy ſhould be a perfect contraſt to that of ARISTOTLE; yet, in what he has ſaid in different parts of his writings, of our perception of external objects, there ſeems to be ſome obſcurity, and even inconſiſtency; whether owing to his having had different opinions on the ſubject at different times, or to the difficulty he found in it, I will not pretend to ſay.

There are two points in particular, wherein I cannot reconcile him to himſelf: The *firſt*, regarding the place of the ideas or images of external objects, which are the immediate objects of perception; the *ſecond*, with regard to the veracity of our external ſenſes.

As to the *firſt*, he ſometimes places the ideas of material objects in the brain, not only when they are perceived, but when they are remembered or imagined; and this has always been held to be the Carteſian doctrine; yet he ſometimes ſays, that we are not to conceive the images or traces in the brain to be perceived, as if there were eyes in the brain; theſe traces are only occaſions on which, by the laws of the union of ſoul and body, ideas are excited in the mind; and there-

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fore it is not neceſſary that there ſhould be an exact reſemblance between the traces and the things repreſented by them, any more than that words or ſigns ſhould be exactly like the things ſignified by them.

Theſe two opinions, I think, cannot be reconciled. For, if the images or traces in the brain are perceived, they muſt be the objects of perception, and not the occaſions of it only. On the other hand, if they are only the occaſions of our perceiving, they are not perceived at all. DES CARTES ſeems to have heſitated between the two opinions, or to have paſſed from the one to the other. Mr LOCKE ſeems, in like manner, to have wavered between the two; ſometimes repreſenting the ideas of material things as being in the brain, but more frequently as in the mind itſelf. Neither DES CARTES nor Mr LOCKE could, conſiſtently with themſelves, attribute any other qualities to images in the brain, but extention, figure, and motion; for as to thoſe qualities which Mr LOCKE diſtinguiſhed by the name of ſecondary qualities, both Philoſophers believed them not to belong to body at all, and therefore could not aſcribe them to images in the brain.

Sir ISAAC NEWTON and Dr SAMUEL CLARKE, uniformly ſpeak of the ſpecies or images of material things as being in that part of the brain called the *ſenſorium*, and perceived by the mind

there preſent; but the former ſpeaks of this point only incidentally, and with his uſual modeſty, in the form of a query. MALEBRANCHE is perfectly clear and unambiguous in this matter. According to his ſyſtem, the images or traces in the brain are not perceived at all; they are only occaſions upon which, by the laws of Nature, certain ſenſations are felt by us, and certain of the divine ideas diſcovered to our minds.

The *ſecond* point on which DES CARTES ſeems to waver, is with regard to the credit that is due to the teſtimony of our ſenſes.

Sometimes, from the perfection of the Deity, and his being no deceiver, he infers, that our ſenſes and our other faculties cannot be fallacious: And ſince we ſeem clearly to perceive, that the idea of matter comes to us from things external, which it perfectly reſembles, therefore, we muſt conclude, that there really exiſts ſomething extended in length, breadth, and depth, having all the properties which we clearly perceive to belong to an extended thing.

At other times, we find DES CARTES and his followers making frequent complaints, as all the ancient Philoſophers did, of the fallacies of ſenſe. He warns us to throw off its prejudices, and to attend only, with our intellect, to the ideas implanted there. By this means we may perceive, that the nature of matter does not conſiſt in hardneſs,

hardneſs, colour, weight, or any of thoſe things that affect our ſenſes, but in this only, that it is ſomething extended in length, breadth and depth. The ſenſes, he ſays, are only relative to our preſent ſtate; they exhibit things only, as they tend to profit or to hurt us, and rarely, and by accident only, as they are in themſelves.

It was probably owing to an averſion to admit any thing into philoſophy, of which we have not a clear and diſtinct conception, that DES CARTES was led to deny, that there is any ſubſtance of matter, diſtinct from thoſe qualities of it which we perceive. We ſay, that matter is ſomething extended, figured, moveable. Extention, figure, mobility, therefore, are not matter, but qualities, belonging to this ſomething, which we call *matter*. DES CARTES could not reliſh this obſcure *ſomething*, which is ſuppoſed to be the ſubject or *ſubſtratum* of thoſe qualities; and therefore maintained, that extenſion is the very eſſence of matter. But, as we muſt aſcribe extenſion to ſpace as well as to matter, he found himſelf under a neceſſity of holding, that ſpace and matter are the ſame thing, and differ only in our way of conceiving them; ſo that, wherever there is ſpace there is matter, and no void left in the univerſe. The neceſſary conſequence of this is, that the material world has no bounds nor limits. He did not, however, chooſe to call it infinite, but indefinite.

It was probably owing to the ſame cauſe that DES CARTES made the eſſence of the ſoul to conſiſt in thought: He would not allow it to be an unknown ſomething that has the power of thinking; it cannot therefore be without thought: And as he conceived that there can be no thought without ideas, the ſoul muſt have had ideas in its firſt formation, which, of conſequence, are innate.

The ſentiments of thoſe who come after DES CARTES, with regard to the nature of body and mind, have been various. Many have maintained, that body is only a collection of qualities to which we give one name; and that the notion of a ſubject of inheſion, to which thoſe qualities belong, is only a fiction of the mind. Some have even maintained, that the ſoul is only a ſucceſſion of related ideas, without any ſubject of inheſion. It appears, by what has been ſaid, how far theſe notions are allied to the Carteſian ſyſtem.

The triumph of the Carteſian ſyſtem over that of ARISTOTLE, is one of the moſt remarkable revolutions in the hiſtory of philoſophy, and has led me to dwell longer upon it than the preſent ſubject perhaps required. The authority of ARISTOTLE was now no more. That reverence for hard words and dark notions, by which mens underſtanding had been ſtrangled in early years, was turned into contempt, and every thing ſuſ-

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pected which was not clearly and diſtinctly underſtood. This is the ſpirit of the Carteſian philoſophy, and is a more important acquiſition to mankind than any of its particular tenets; and for exerting this ſpirit ſo zealouſly, and ſpreading it ſo ſucceſsfully, DES CARTES deſerves immortal honour.

It is to be obſerved, however, that DES CARTES rejected a part only of the ancient theory, concerning the perception of external objects by the ſenſes, and that he adopted the other part. That theory may be divided into two parts: The *firſt*, That images, ſpecies, or forms of external objects, come from the object, and enter by the avenues of the ſenſes to the mind; the *ſecond* part is, That the external object itſelf is not perceived, but only the ſpecies or image of it in the mind. The firſt part DES CARTES and his followers rejected, and refuted by ſolid arguments; but the ſecond part, neither he, nor his followers, have thought of calling in queſtion; being perſuaded, that it is only a repreſentative image, in the mind, of the external object that we perceive, and not the object itſelf. And this image, which the Peripatetics called a ſpecies, he calls an idea, changing the name only, while he admits the thing.

It ſeems ſtrange, that the great pains which this Philoſopher took to throw off the prejudices of education, to diſmiſs all his former opi-

nions, and to aſſent to nothing, till he found evidence that compelled his aſſent, ſhould not have led him to doubt of this opinion of the ancient philoſophy. It is evidently a philoſophical opinion; for the vulgar undoubtedly believe that it is the external object which we immediately perceive, and not a repreſentative image of it only. It is for this reaſon, that they look upon it as a perfect lunacy to call in queſtion the exiſtence of external objects.

It ſeems to be admitted as a firſt principle by the learned and the unlearned, that what is really perceived muſt exiſt, and that to perceive what does not exiſt is impoſſible. So far the unlearned man and the Philoſopher agree. The unlearned man ſays, I perceive the external object, and I perceive it to exiſt. Nothing can be more abſurd than to doubt of it. The Peripatetic ſays, what I perceive is the very identical form of the object, which came immediately from the object, and makes an impreſſion upon my mind, as a ſeal does upon wax; and therefore, I can have no doubt of the exiſtence of an object whoſe form I perceive. But what ſays the Carteſian? I perceive not, ſays he, the external object itſelf. So far he agrees with the Peripatetic, and differs from the unlearned man. But I perceive an image, or form, or idea, in my own mind, or in my brain. I am certain of the exiſtence of the idea, becauſe I immediately perceive it, But how this idea is formed,

formed, or what it repreſents, is not ſelf-evident; and therefore I muſt find arguments, by which, from the exiſtence of the idea which I perceive, I can infer the exiſtence of an external object which it repreſents.

As I take this to be a juſt view of the principles of the unlearned man, of the Peripatetic, and of the Carteſian, ſo I think they all reaſon conſequentially from their ſeveral principles; that the Carteſian has ſtrong grounds to doubt of the exiſtence of external objects; the Peripatetic very little ground of doubt; and the unlearned man none at all: And that the difference of their ſituation ariſes from this, that the unlearned man has no hypotheſis; the Peripatetic leans upon an hypotheſis; and the Carteſian upon one half of that hypotheſis.

Des Cartes, according to the ſpirit of his own philoſophy, ought to have doubted of both parts of the Peripatetic h potheſis, or to have given his reaſons why he adopted one part, as well as why he rejected the other part; eſpecially, ſince the unlearned, who have the faculty of perceiving objects by their ſenſes in no leſs perfection than Philoſophers, and ſhould therefore know, as well as they, what it is they perceive, have been unanimous in this, that the objects they perceive are not ideas in their own minds, but things external. It might have been expected, that a Philoſopher who was ſo cauti-

ous as not to take his own exiſtence for granted without proof, would not have taken it for granted, without proof, that every thing he perceived was only ideas in his own mind.

But if DES CARTES made a raſh ſtep in this, as I apprehend he did, he ought not to bear the blame alone. His ſucceſſors have ſtill continued in the ſame track, and, after his example, have adopted one part of the ancient theory, to wit, that the objects we immediately perceive are ideas only. All their ſyſtems are built on this foundation.

CHAP. IX.

Of the Sentiments of Mr LOCKE.

THE reputation which LOCKE's Eſſay on human underſtanding had at home from the beginning, and which it has gradually acquired abroad, is a ſufficient teſtimony of its merit. There is perhaps no book of the metaphyſical kind that has been ſo generally read by thoſe who underſtand the language, or that is more adapted to teach men to think with preciſion, and to inſpire them with that candour and love of truth, which is the genuine ſpirit of philoſophy. He gave, I believe, the firſt example in the Engliſh language of writing on ſuch abſtract ſubjects,

ſubjects, with a remarkable degree of ſimplicity and perſpicuity; and in this he has been happily imitated by others that came after him. No author hath more ſucceſsfully pointed out the danger of ambiguous words, and the importance of having diſtinct and determinate notions in judging and reaſoning. His obſervations on the various powers of the human underſtanding, on the uſe and abuſe of words, and on the extent and limits of human knowledge, are drawn from attentive reflection on the operations of his own mind, the true ſource of all real knowledge on theſe ſubjects; and ſhew an uncommon degree of penetration and judgment: But he needs no panegyric of mine; and I mention theſe things, only that, when I have occaſion to differ from him, I may not be thought inſenſible of the merit of an author whom I highly reſpect, and to whom I owe my firſt lights in thoſe ſtudies, as well as my attachment to them.

He ſets out in his Eſſay with a full conviction, common to him with other Philoſophers, that ideas in the mind are the objects of all our thoughts in every operation of the underſtanding. This leads him to uſe the word *idea* ſo very frequently, beyond what was uſual in the Engliſh language, that he thought it neceſſary in his introduction to make this apology: "It "being that term, ſays he, which, I think, "ſerves beſt to ſtand for whatſoever is the ob-

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" ject of underſtanding, when a man thinks; " I have uſed it to expreſs whatever is meant " by phantaſm, notion, ſpecies, or whatever it " is which the mind can be employed about in " thinking; and I could not avoid frequently " uſing it. I preſume it will be granted me, that " there are ſuch ideas in mens minds; every " man is conſcious of them in himſelf; and mens " words and actions will ſatisfy him that they " are in others."

Speaking of the reality of our knowledge, he ſays, " It is evident the mind knows not " things immediately, but only by the interven- " tion of the ideas it has of them: Our know- " ledge therefore is real, only ſo far as there " is a conformity between our ideas and the rea- " lity of things. But what ſhall be here the " criterion? How ſhall the mind, when it per- " ceives nothing but its own ideas, know that " they agree with things themſelves? This, " though it ſeems not to want difficulty, yet I " think there be two ſorts of ideas that we may " be aſſured agree with things."

We ſee that Mr LOCKE was aware no leſs than DES CARTES, that the doctrine of ideas made it neceſſary, and at the ſame time difficult, to prove the exiſtence of a material world without us; becauſe the mind, according to that doctrine, perceives nothing but a world of ideas in itſelf. Not only DES CARTES, but MALEBRANCHE, ARNAULD,

NAULD, and NORRIS, had perceived this difficulty, and attempted to remove it with little ſucceſs. Mr LOCKE attempts the ſame thing; but his arguments are feeble. He even ſeems to be conſcious of this: For he concludes his reaſoning with this obſervation, "That we have evi-"dence ſufficient to direct us in attaining the "good and avoiding the evil, cauſed by exter-"nal objects, and that this is the important con-"cern we have in being made acquainted with "them." This indeed is ſaying no more than will be granted by thoſe who deny the exiſtence of a material world.

As there is no material difference between LOCKE and DES CARTES with regard to the perception of objects by the ſenſes, there is the leſs occaſion, in this place, to take notice of all their differences in other points. They differed about the origin of our ideas. DES CARTES thought ſome of them were innate: The other maintained, that there are no innate ideas, and that they are all derived from two ſources, to wit, *ſenſation* and *reflection*; meaning by ſenſation, the operations of our external ſenſes; and by reflection, that attention which we are capable of giving to the operations of our own minds.

They differed with regard to the eſſence both of matter and of mind: The Britiſh Philoſopher holding, that the real eſſence of both is beyond the

the reach of human knowledge; the other conceiving, that the very eſſence of mind conſiſts in thought; and that of matter in extenſion; by which he made matter and ſpace not to differ in reality, and no part of ſpace to be void of matter.

Mr LOCKE explained, more diſtinctly than had been done before, the operations of the mind in claſſing the various objects of thought, and reducing them to genera and ſpecies. He was the firſt, I think, who diſtinguiſhed in ſubſtances what he calls the nominal eſſence, which is only the notion we form of a genus or ſpecies, and which we expreſs by a definition, from the real eſſence or internal conſtitution of the thing, which makes it to be what it is. Without this diſtinction, the ſubtile diſputes which tortured the ſchoolmen for ſo many ages, in the controverſy between the nominaliſts and realiſts, could never be brought to an iſſue. He ſhews diſtinctly how we form abſtract and general notions, and the uſe and neceſſity of them in reaſoning. And as (according to the received principles of Philoſophers) every notion of our mind muſt have for its object an idea in the mind itſelf; he thinks that we form abſtract ideas by leaving out of the idea of an individual, every thing wherein it differs from other individuals of the ſame ſpecies or genus; and that this power of forming abſtract ideas, is that which chiefly diſtinguiſhes

tinguiſhes us from brute animals, in whom he could ſee no evidence of any abſtract ideas.

Since the time of DES CARTES, Philoſophers have differed much with regard to the ſhare they aſcribe to the mind itſelf, in the fabrication of thoſe repreſentative beings called *ideas*, and the manner in which this work is carried on.

Of the authors I have met with, Dr ROBERT HOOK is the moſt explicit. He was one of the moſt ingenious and active members of the Royal Society of London at its firſt inſtitution; and frequently read lectures to the Society, which were publiſhed among his poſthumous works. In his lectures upon Light, ſect. 7. he makes ideas to be material ſubſtances; and thinks that the brain is furniſhed with a proper kind of matter for fabricating the ideas of each ſenſe. The ideas of ſight, he thinks, are formed of a kind of matter reſembling the Bononian ſtone, or ſome kind of phoſphorus; that the ideas of ſound are formed of ſome matter reſembling the chords or glaſſes which take a ſound from the vibrations of the air; and ſo of the reſt.

The ſoul, he thinks, may fabricate ſome hundreds of thoſe ideas in a day; and that as they are formed, they are puſhed farther off from the centre of the brain where the ſoul reſides. By this means they make a continued chain of ideas, coyled up in the brain, the firſt end of which is fartheſt removed from the centre or ſeat of the ſoul;

ſoul; and the other end is always at the centre, being the laſt idea formed, which is always the preſent moment when conſidered; and therefore, according as there is a greater number of ideas between the preſent ſenſation or thought in the centre and any other, the ſoul is apprehenſive of a larger portion of time interpoſed.

Mr LOCKE has not entered into ſo minute a detail of this manufacture of ideas; but he aſcribes to the mind a very conſiderable hand in forming its own ideas. With regard to our ſenſations, the mind is paſſive, "they being produced in us, "only by different degrees and modes of mo-"tion in our animal ſpirits, variouſly agitated by "external object:" Theſe, however, ceaſe to be, as ſoon as they ceaſe to be perceived; but, by the faculties of memory and imagination, "the mind has an ability, when it wills, to re-"vive them again, and, as it were, to paint them "anew upon itſelf, though ſome with more, ſome "with leſs difficulty."

As to the ideas of reflection, he aſcribes them to no other cauſe but to that attention which the mind is capable of giving to its own operations: Theſe, therefore, are formed by the mind itſelf. He aſcribes likewiſe to the mind the power of compounding its ſimple ideas into complex ones of various forms; of repeating them, and adding the repetitions together; of dividing and claſſing them; of comparing them, and, from that

that compariſon, of forming the ideas of their relation; nay, of forming a general idea of a ſpecies or genus, by taking from the idea of an individual every thing by which it is diſtinguiſhed from other individuals of the kind, till at laſt it becomes an abſtract general idea, common to all the individuals of the kind.

Theſe, I think, are the powers which Mr LOCKE aſcribes to the mind itſelf in the fabrication of its ideas. Biſhop BERKELEY, as we ſhall ſee afterwards, abridged them conſiderably, and Mr HUME much more.

The ideas we have of the various qualities of bodies are not all, as Mr LOCKE thinks, of the ſame kind. Some of them are images or reſemblances of what is really in the body; others are not. There are certain qualities inſeparable from matter; ſuch as extenſion, ſolidity, figure, mobility. Our ideas of theſe are real reſemblances of the qualities in the body; and theſe he calls primary qualities: But colour, ſound, taſte, ſmell, heat, and cold, he calls ſecondary qualities, and thinks that they are only powers in bodies of producing certain ſenſations in us; which ſenſations have nothing reſembling them, though they are commonly thought to be exact reſemblances of ſomething in the body. "Thus, "ſays he, the idea of heat or light, which we "receive, by our eye or touch, from the ſun, "are commonly thought real qualities exiſting

"in

" in the ſun, and ſomething more than mere " powers in it."

The names of primary and ſecondary qualities, were, I believe, firſt uſed by Mr LOCKE; but the diſtinction, which they expreſs, was well underſtood by DES CARTES, and is explained by him in his *Principia*, part 1. ſect. 69, 70, 71.

Although no author has more merit than Mr LOCKE, in pointing out the ambiguity of words, and reſolving, by that means, many knotty queſtions, which had tortured the wits of the ſchoolmen; yet, I apprehend he has been ſometimes miſled by the ambiguity of the word *idea*, which he uſes ſo often almoſt in every page of his Eſſay.

In the explication given of this word, we took notice of two meanings given to it; a popular and a philoſophical. In the popular meaning, to have an idea of any thing, ſignifies nothing more than to think of it.

Although the operations of the mind are moſt properly and naturally, and indeed moſt commonly in all vulgar languages, expreſſed by active verbs, there is another way of expreſſing them leſs common, but equally well underſtood. To think of a thing, and to have a thought of it; to believe a thing, and to have a belief of it; to ſee a thing, and have a ſight of it; to conceive a thing, and to have a conception, notion, or idea of it, are phraſes perfectly ſynonymous. In theſe phraſes, the thought means nothing but the

the act of thinking; the belief, the act of believing; and the conception, notion, or idea, the act of conceiving. To have a clear and distinct idea, is, in this sense, nothing else but to conceive the thing clearly and distinctly. When the word *idea* is taken in this popular sense, there can be no doubt of our having ideas in our minds. To think without ideas would be to think without thought, which is a manifest contradiction.

But there is another meaning of the word *idea* peculiar to Philosophers, and grounded upon a philosophical theory, which the vulgar never think of. Philosophers, ancient and modern, have maintained, that the operations of the mind, like the tools of an artificer, can only be employed upon objects that are present in the mind, or in the brain, where the mind is supposed to reside. Therefore, objects that are distant, in time or place, must have a representative in the mind, or in the brain; some image or picture of them, which is the object that the mind contemplates. This representative image was, in the old philosophy, called a *species* or *phantasm*. Since the time of DES CARTES, it has more commonly been called an *idea*; and every thought is conceived to have an idea for its object. As this has been a common opinion among Philosophers, as far back as we can trace philosophy, it is the less to be wondered at, that they should be apt to confound the operation of the mind in

thinking, with the idea or object of thought, which is ſuppoſed to be its inſeparable concomitant.

If we pay any regard to the common ſenſe of mankind, thought and the object of thought are different things, and ought to be diſtinguiſhed. It is true, thought cannot be without an object; for every man who thinks muſt think of ſomething; but the object he thinks of is one thing, his thought of that object is another thing. They are diſtinguiſhed in all languages even by the vulgar; and many things may be affirmed of thought, that is, of the operation of the mind in thinking, which cannot without error, and even abſurdity, be affirmed of the object of that operation.

From this, I think it is evident, that if the word *idea*, in a work where it occurs in every paragraph, be uſed without any intimation of the ambiguity of the word, ſometimes to ſignify thought, or the operation of the mind in thinking, ſometimes to ſignify thoſe internal objects of thought which Philoſophers ſuppoſe, this muſt occaſion confuſion in the thoughts both of the author and of the readers. I take this to be the greateſt blemiſh in the Eſſay on Human Underſtanding. I apprehend this is the true ſource of ſeveral paradoxical opinions in that excellent work, which I ſhall have occaſion to take notice of.

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Here it is very natural to aſk, Whether it was Mr LOCKE's opinion, that ideas are the only objects of thought? or, Whether it is not poſſible for men to think of things which are not ideas in the mind?

To this queſtion it is not eaſy to give a direct anſwer. On the one hand, he ſays often, in diſtinct and ſtudied expreſſions, that the term *idea* ſtands for whatever is the object of the underſtanding when a man thinks, or whatever it is which the mind can be employed about in thinking: That the mind perceives nothing but its own ideas: That all knowledge conſiſts in the perception of the agreement or diſagreement of our ideas: That we can have no knowledge further than we have ideas. Theſe, and many other expreſſions of the like import, evidently imply, that every object of thought muſt be an idea, and can be nothing elſe.

On the other hand, I am perſuaded that Mr LOCKE would have acknowledged, that we may think of ALEXANDER the Great, or of the planet Jupiter, and of numberleſs things, which he would have owned are not ideas in the mind, but objects which exiſt independent of the mind that thinks of them.

How ſhall we reconcile the two parts of this apparent contradiction? All I am able to ſay upon Mr LOCKE's principles to reconcile them, is this, That we cannot think of ALEXANDER,

or of the planet Jupiter, unleſs we have in our minds an idea, that is, an image or picture of thoſe objects. The idea of ALEXANDER is an image, or picture, or repreſentation of that hero in my mind; and this idea is the immediate object of my thought when I think of ALEXANDER. That this was LOCKE's opinion, and that it has been generally the opinion of Philoſophers, there can be no doubt.

But, inſtead of giving light to the queſtion propoſed, it ſeems to involve it in greater darkneſs.

When I think of ALEXANDER, I am told there is an image or idea of ALEXANDER in my mind, which is the immediate object of this thought. The neceſſary conſequence of this ſeems to be, that there are two objects of this thought; the idea, which is in the mind, and the perſon repreſented by that idea; the firſt, the immediate object of the thought, the laſt, the object of the ſame thought, but not the immediate object. This is a hard ſaying; for it makes every thought of things external to have a double object. Every man is conſcious of his thoughts, and yet, upon attentive reflection, he perceives no ſuch duplicity in the object he thinks about. Sometimes men ſee objects double, but they always know when they do ſo: And I know of no Philoſopher who has expreſsly owned this duplicity in the object of thought,

thought, though it follows neceſſarily from maintaining, that, in the ſame thought, there is one object, that is immediate and in the mind itſelf, and another object, which is not immediate, and which is not in the mind.

Beſides this, it ſeems very hard, or rather impoſſible, to underſtand what is meant by an object of thought, that is not an immediate object of thought. A body in motion may move another that was at reſt, by the medium of a third body that is interpoſed. This is eaſily underſtood; but we are unable to conceive any medium interpoſed between a mind and the thought of that mind; and, to think of any object by a medium, ſeems to be words without any meaning. There is a ſenſe in which a thing may be ſaid to be perceived by a medium. Thus, any kind of ſign may be ſaid to be the medium by which I perceive or underſtand the thing ſignified. The ſign, by cuſtom, or compact, or perhaps by nature, introduces the thought of the thing ſignified. But here the thing ſignified, when it is introduced to the thought, is an object of thought no leſs immediate than the ſign was before: And there are here two objects of thought, one ſucceeding another, which we have ſhown is not the caſe with reſpect to an idea, and the object it repreſents.

I apprehend, therefore, that if Philoſophers will maintain, that ideas in the mind are the

only immediate objects of thought, they will be forced to grant that they are the ſole objects of thought, and that it is impoſſible for men to think of any thing elſe. Yet, ſurely Mr LOCKE believed that we can think of many things that are not ideas in the mind; but he ſeems not to have perceived, that the maintaining that ideas in the mind are the only immediate objects of thought, muſt neceſſarily draw this conſequence along with it.

The conſequence, however, was ſeen by Biſhop BERKELEY and Mr HUME, who rather choſe to admit the conſequence than to give up the principle from which it follows.

Perhaps it was unfortunate for Mr LOCKE, that he uſed the word idea ſo very frequently, as to make it very difficult to give the attention neceſſary to put it always to the ſame meaning. And it appears evident, that, in many places, he means nothing more by it but the notion or conception we have of any object of thought; that is, the act of the mind in conceiving it, and not the object conceived.

In explaining this word, he ſays, that he uſes it for whatever is meant by phantaſm, notion, ſpecies. Here are three ſynonymes to the word *idea*. The firſt and laſt are very proper to expreſs the philoſophical meaning of the word, being terms of art in the Peripatetic philoſophy, and ſignifying images of external things in the mind,

mind, which, according to that philoſophy, are objects of thought. But the word *notion* is a word in common language, whoſe meaning agrees exactly with the popular meaning of the word *idea*, but not with the philoſophical.

When theſe two different meanings of the word *idea* are confounded in a ſtudied explication of it, there is little reaſon to expect that they ſhould be carefully diſtinguiſhed in the frequent uſe of it. There are many paſſages in the Eſſay, in which, to make them intelligible the word *idea* muſt be taken in one of thoſe ſenſes, and many others, in which it muſt be taken in the other. It ſeems probable, that the author, not attending to this ambiguity of the word, uſed it in the one ſenſe or the other, as the ſubject-matter required; and the far greater part of his readers have done the ſame.

There is a third ſenſe, in which he uſes the word not unfrequently, to ſignify objects of thought that are not in the mind, but external. Of this he ſeems to be ſenſible, and ſomewhere makes an apology for it. When he affirms, as he does in innumerable places, that all human knowledge conſiſts in the perception of the agreement or diſagreement of our ideas, it is impoſſible to put a meaning upon this, conſiſtent with his principles, unleſs he means by ideas every object of human thought, whether mediate or immediate; every thing, in

a word, that can be ſignified by the ſubject, or by the predicate of a propoſition.

Thus we ſee, that the word *idea* has three different meanings in the Eſſay; and the author ſeems to have uſed it ſometimes in one, ſometimes in another, without being aware of any change in the meaning. The reader ſlides eaſily into the ſame fallacy, that meaning occurring moſt readily to his mind which gives the beſt ſenſe to what he reads. I have met with perſons profeſſing no ſlight acquaintance with the Eſſay on Human Underſtanding, who maintained, that the word *idea*, wherever it occurs, means nothing more than thought; and that where he ſpeaks of ideas as images in the mind, and as objects of thought, he is not to be underſtood as ſpeaking properly, but figuratively or analogically: And indeed I apprehend, that it would be no ſmall advantage to many paſſages in the book, if they could admit of this interpretation.

It is not the fault of this Philoſopher alone to have given too little attention to the diſtinction between the operations of the mind and the objects of thoſe operations. Although this diſtinction be familiar to the vulgar, and found in the ſtructure of all languages, Philoſophers, when they ſpeak of ideas, often confound the two together; and their theory concerning ideas has led them to do ſo: For ideas being ſuppoſed to be a ſhadowy kind of beings, intermediate between

tween the thought, and the object of thought, ſometimes ſeem to coaleſce with the thought, ſometimes with the object of thought, and ſometimes to have a diſtinct exiſtence of their own.

The ſame philoſophical theory of ideas has led Philoſophers to confound the different operations of the underſtanding, and to call them all by the name of perception. Mr Locke, though not free from this fault, is not ſo often chargeable with it, as ſome who came after him. The vulgar give the name of perception to that immediate knowledge of external objects which we have by our external ſenſes. This is its proper meaning in our language, though ſometimes it may be applied to other things metaphorically or analogically. When I think of any thing that does not exiſt, as of the republic of Oceana, I do not perceive it; I only conceive or imagine it: When I think of what happened to me yeſterday, I do not perceive but remember it: When I am pained with the gout, it is not proper to ſay I perceive the pain; I feel it; or am conſcious of it: It is not an object of perception, but of ſenſation and of conſciouſneſs. So far the vulgar diſtinguiſh very properly the different operations of the mind, and never confound the names of things ſo different in their nature: But the theory of ideas leads Philoſophers to conceive all thoſe operations to be of one nature, and to give them one name: They are all, according

to

to that theory, the perception of ideas in the mind. Perceiving, remembering, imagining, being conſcious, are all perceiving ideas in the mind, and are called *perceptions*. Hence it is that Philoſophers ſpeak of the perceptions of memory, and the perceptions of imagination. They make ſenſation to be a perception; and every thing we perceive by our ſenſes to be an idea of ſenſation: Sometimes they ſay, that they are conſcious of the ideas in their own minds, ſometimes that they perceive them.

However improbable it may appear that Philoſophers, who have taken pains to ſtudy the operations of their own minds, ſhould expreſs them leſs properly, and leſs diſtinctly than the vulgar, it ſeems really to be the caſe; and the only account that can be given of this ſtrange phænomenon, I take to be this: That the vulgar ſeek no theory to account for the operations of their minds; they know that they ſee, and hear, and remember, and imagine; and thoſe who think diſtinctly will expreſs theſe operations diſtinctly, as their conſciouſneſs repreſents them to the mind: But Philoſophers think they ought to know not only that there are ſuch operations, but how they are performed; how they ſee, and hear, and remember, and imagine; and, having invented a theory to explain theſe operations, by ideas or images in the mind, they ſuit their expreſſions to their theory; and as a falſe

falſe comment throws a cloud upon the text, ſo a falſe theory darkens the phænomena which it attempts to explain.

We ſhall examine this theory afterwards. Here I would only obſerve, that if it is not true, it may be expected that it ſhould lead ingenious men who adopt it to confound the operations of the mind with their objects, and with one another, even where the common language of the unlearned clearly diſtinguiſhes them. One that truſts to a falſe guide is in greater danger of being led aſtray than he who truſts his own eyes, though he ſhould be but indifferently acquainted with the road.

CHAP. X.

Of the Sentiments of Biſhop BERKELEY.

GEORGE BERKELEY, afterwards Biſhop of Cloyne, publiſhed his new Theory of Viſion in 1709; his Treatiſe on the Principles of Human Knowledge in 1710; and his Dialogues between Hylas and Philonous in 1713; being then a fellow of Trinity College, Dublin. He is acknowledged univerſally to have great merit as an excellent writer, and a very acute and clear reaſoner on the moſt abſtract ſubjects, not to ſpeak of his virtues as a man, which were very conſpicuous:

ſuſpicious: Yet the doctrine chiefly held forth in the treatiſes above mentioned, eſpecially in the two laſt, has generally been thought ſo very abſurd, that few can be brought to think that he either believed it himſelf, or that he ſeriouſly meant to perſuade others of its truth.

He maintains, and thinks he has demonſtrated, by a variety of arguments, grounded on principles of philoſophy univerſally received, that there is no ſuch thing as matter in the univerſe; that ſun and moon, earth and ſea, our own bodies, and thoſe of our friends, are nothing but ideas in the minds of thoſe who think of them, and that they have no exiſtence when they are not the objects of thought; that all that is in the univerſe may be reduced to two categories, to wit, minds, and ideas in the mind.

But however abſurd this doctrine might appear to the unlearned, who conſider the exiſtence of the objects of ſenſe as the moſt evident of all truths, and what no man in his ſenſes can doubt; the Philoſophers, who had been accuſtomed to conſider ideas as the immediate objects of all thought, had no title to view this doctrine of BERKELEY in ſo unfavourable a light.

They were taught by DES CARTES, and by all that came after him, that the exiſtence of the objects of ſenſe is not ſelf-evident, but requires to be proved by arguments; and although

though DES CARTES, and many others, had laboured to find arguments for this purpoſe, there did not appear to be that force and clearneſs in them which might have been expected in a matter of ſuch importance. Mr NORRIS had declared, that after all the arguments that had been offered, the exiſtence of an external world is only probable, but by no means certain. MALEBRANCHE thought it reſted upon the authority of revelation, and that the arguments drawn from reaſon were not perfectly concluſive. Others thought, that the argument from revelation was a mere ſophiſm, becauſe revelation comes to us by our ſenſes, and muſt reſt upon their authority.

Thus we ſee, that the new philoſophy had been making gradual approaches towards BERKELEY's opinion; and, whatever others might do, the Philoſophers had no title to look upon it as abſurd, or unworthy of a fair examination. Several authors attempted to anſwer his arguments, but with little ſucceſs, and others acknowledged that they could neither anſwer them nor aſſent to them. It is probable the Biſhop made but few converts to his doctrine; but it is certain he made ſome; and that he himſelf continued, to the end of his life, firmly perſuaded, not only of its truth, but of its great importance for the improvement of human knowledge, and eſpecially for the defence of religion. Dial. Pref.

" If

"If the principles which I here endeavour to "propagate are admitted for true, the conſe- "quences which I think evidently flow from "thence are, that atheiſm and ſcepticiſm will be "utterly deſtroyed, many intricate points made "plain, great difficulties ſolved, ſeveral uſeleſs "parts of ſcience retrenched, ſpeculation refer- "red to practice, and men reduced from para- "doxes to common ſenſe."

In the Theory of Viſion, he goes no further than to aſſert, that the objects of ſight are nothing but ideas in the mind, granting, or at leaſt not denying, that there is a tangible world, which is really external, and which exiſts whether we perceive it or not. Whether the reaſon of this was, that his ſyſtem had not, at that time, wholly opened to his own mind, or whether he thought it prudent to let it enter into the minds of his readers by degrees, I cannot ſay. I think he inſinuates the laſt as the reaſon in the Principles of Human Knowledge.

The Theory of Viſion, however, taken by itſelf, and without relation to the main branch of his ſyſtem, contains very important diſcoveries, and marks of great genius. He diſtinguiſhes, more accurately than any that went before him, between the immediate objects of ſight, and thoſe of the other ſenſes which are early aſſociated with them. He ſhews, that diſtance, of itſelf, and immediately, is not ſeen; but

but that we learn to judge of it by certain ſenſations and perceptions which are connected with it. This is a very important obſervation; and, I believe, was firſt made by this author. It gives much new light to the operations of our ſenſes, and ſerves to account for many phænomena in optics, of which the greateſt adepts in that ſcience had always either given a falſe account, or acknowledged that they could give none at all.

We may obſerve, by the way, that the ingenious author ſeems not to have attended to a diſtinction, by which his general aſſertion ought to have been limited. It is true that the diſtance of an object from the eye is not immediately ſeen; but there is a certain kind of diſtance of one object from another which we ſee immediately. The author acknowledges, that there is a viſible extenſion, and viſible figures, which are proper objects of ſight; there muſt therefore be a viſible diſtance. Aſtronomers call it angular diſtance; and although they meaſure it by the angle, which is made by two lines drawn from the eye to the two diſtant objects, yet it is immediately perceived by ſight, even by thoſe who never thought of that angle.

He led the way in ſhewing how we learn to perceive the diſtance of an object from the eye, though this ſpeculation was carried further by others who came after him. He made the diſtinction

diſtinction between that extenſion and figure which we perceive by ſight only, and that which we perceive by touch; calling the firſt, viſible, the laſt, tangible extenſion and figure. He ſhewed likewiſe, that tangible extenſion, and not viſible, is the object of geometry, although Mathematicians commonly uſe viſible diagrams in their demonſtrations.

The notion of extenſion and figure which we get from ſight only, and that which we get from touch, have been ſo conſtantly conjoined from our infancy in all the judgments we form of the objects of ſenſe, that it required great abilities to diſtinguiſh them accurately, and to aſſign to each ſenſe what truly belongs to it; "ſo "difficult a thing it is," as BERKELEY juſtly obſerves, "to diſſolve an union ſo early begun, and "confirmed by ſo long a habit." This point he has laboured, through the whole of the Eſſay on Viſion, with that uncommon penetration and judgment which he poſſeſſed, and with as great ſucceſs as could be expected in a firſt attempt upon ſo abſtruſe a ſubject.

He concludes this Eſſay, by ſhewing, in no leſs than ſeven ſections, the notions which an intelligent being, endowed with ſight, without the ſenſe of touch, might form of the objects of ſenſe. This ſpeculation, to ſhallow thinkers, may appear to be egregious trifling. To Biſhop BERKELEY it appeared in another light, and will do

do ſo to thoſe who are capable of entering into it, and who know the importance of it, in ſolving many of the phænomena of viſion. He ſeems, indeed, to have exerted more force of genius in this than in the main branch of his ſyſtem.

In the new philoſophy, the pillars by which the exiſtence of a material world was ſupported, were ſo feeble, that it did not require the force of a SAMSON to bring them down; and in this we have not ſo much reaſon to admire the ſtrength of BERKELEY's genius, as his boldneſs in publiſhing to the world an opinion, which the unlearned would be apt to interpret as the ſign of a crazy intellect. A man who was firmly perſuaded of the doctrine univerſally received by Philoſophers concerning ideas, if he could but take courage to call in queſtion the exiſtence of a material world, would eaſily find unanſwerable arguments in that doctrine. "Some truths there are," ſays BERKELEY, "ſo "near and obvious to the mind, that a man need "only open his eyes to ſee them. Such," he adds, "I take this important one to be, that all "the choir of heaven, and furniture of the "earth; in a word, all thoſe bodies which com-"poſe the mighty frame of the world; have "not any ſubſiſtence without a mind." Princ. § 6.

The principle from which this important concluſion is obviouſly deduced, is laid down in the firſt ſentence of his Principles of Knowledge as evident; and indeed it had always been acknowledged by Philoſophers. "It is evident," ſays he, "to any one who takes a ſurvey of the "objects of human knowledge, that they are "either ideas actually imprinted on the ſenſes, "or elſe ſuch as are perceived, by attending to "the paſſions and operations of the mind; or, "laſtly, ideas formed by help of memory and "imagination, either compounding, dividing, or "barely repreſenting thoſe originally perceived "in the foreſaid ways."

This is the foundation on which the whole ſyſtem reſts. If this be true, then, indeed, the exiſtence of a material world muſt be a dream that has impoſed upon all mankind from the beginning of the world.

The foundation on which ſuch a fabric reſts ought to be very ſolid, and well eſtabliſhed; yet BERKELEY ſays nothing more for it than that it is evident. If he means that it is ſelf-evident, this, indeed, might be a good reaſon for not offering any direct argument in proof of it. But I apprehend this cannot juſtly be ſaid. Self-evident propoſitions are thoſe which appear evident to every man of ſound underſtanding who apprehends the meaning of them diſtinctly, and attends to them without prejudice. Can this

this be ſaid of this propoſition, that all the objects of our knowledge are ideas in our own minds? I believe, that, to any man uninſtructed in philoſophy, this propoſition will appear very improbable, if not abſurd. However ſcanty his knowledge may be, he conſiders the ſun and moon, the earth and ſea, as objects of it: And it will be difficult to perſuade him, that thoſe objects of his knowledge are ideas in his own mind, and have no exiſtence when he does not think of them. If I may preſume to ſpeak my own ſentiments, I once believed this doctrine of ideas ſo firmly, as to embrace the whole of BERKELEY's ſyſtem in conſequence of it; till, finding other conſequences to follow from it, which gave me more uneaſineſs than the want of a material world, it came into my mind, more than forty years ago, to put the queſtion, What evidence have I for this doctrine, that all the objects of my knowledge are ideas in my own mind? From that time to the preſent, I have been candidly and impartially, as I think, ſeeking for the evidence of this principle, but can find none, excepting the authority of Philoſophers.

We ſhall have occaſion to examine its evidence afterwards. I would at preſent only obſerve, that all the arguments brought by BERKELEY againſt the exiſtence of a material world are grounded upon it; and that he has not attempted

tempted to give any evidence for it, but takes it for granted, as other Philoſophers had done before him.

But ſuppoſing this principle to be true, BERKELEY's ſyſtem is impregnable. No demonſtration can be more evident than his reaſoning from it. Whatever is perceived is an idea, and an idea can only exiſt in a mind. It has no exiſtence when it is not perceived; nor can there be any thing like an idea, but an idea.

So ſenſible he was, that it required no laborious reaſoning to deduce his ſyſtem from the principle laid down, that he was afraid of being thought needleſsly prolix in handling the ſubject, and makes an apology for it. Princ. § 22. "To "what purpoſe is it," ſays he, "to dilate, upon "that which may be demonſtrated, with the ut"moſt evidence, in a line or two, to any one who "is capable of the leaſt reflection." But though his demonſtration might have been comprehended in a line or two, he very prudently thought, than an opinion, which the world would be apt to look upon as a monſter of abſurdity, would not be able to make its way at once, even by the force of a naked demonſtration. He obſerves juſtly, Dial. 2. "That though a demon"ſtration be never ſo well grounded, and fairly "propoſed, yet, if there is, withal, a ſtrain of "prejudice, or a wrong bias on the underſtand"ing, can it be expected to perceive clearly,

"and

" and adhere firmly to the truth? No; there is " need of time and pains; the attention muſt " be awakened and detained, by a frequent re- " petition of the ſame thing, placed often in " the ſame, often in different lights."

It was therefore neceſſary to dwell upon it, and turn it on all ſides till it became familiar; to conſider all its conſequences, and to obviate every prejudice and prepoſſeſſion that might hinder its admittance. It was even a matter of ſome difficulty to fit it to common language, ſo far as to enable men to ſpeak and reaſon about it intelligibly. Thoſe who have entered ſeriouſly into BERKELEY's ſyſtem, have found, after all the aſſiſtance which his writings give, that time and practice are neceſſary to acquire the habit of ſpeaking and thinking diſtinctly upon it.

BERKELEY foreſaw the oppoſition that would be made to his ſyſtem, from two different quarters; *firſt*, from the Philoſopers; and, *ſecondly*, from the vulgar, who are led by the plain dictates of nature. The firſt he had the courage to oppoſe openly and avowedly; the ſecond he dreaded much more, and therefore takes a great deal of pains, and, I think, uſes ſome art, to court into his party. This is particularly obſervable in his Dialogues. He ſets out with a declaration, Dial. 1. " That, of late, he had quitted ſeveral " of the ſublime notions he had got in the ſchools " of the Philoſophers for vulgar opinions," and

aſſures HYLAS, his fellow-dialogiſt, "That, "ſince this revolt from metaphyſical notions to "the plain dictates of nature, and common ſenſe, "he found his underſtanding ſtrangely enlight-"ened; ſo that he could now eaſily comprehend "a great many things, which before were all "myſtery and riddle." Pref. to Dial. "If his "principles are admitted for true, men will be "reduced from paradoxes to common ſenſe." At the ſame time, he acknowledges, "That they "carry with them a great oppoſition to the pre-"judices of Philoſopers, which have ſo far pre-"vailed againſt the common ſenſe and natural "notions of mankind."

When HYLAS objects to him, Dial. 3. "You "can never perſuade me PHILONOUS, that the "denying of matter or corporeal ſubſtance is not "repugnant to the univerſal ſenſe of mankind;" he anſwers, "I wiſh both our opinions were "fairly ſtated, and ſubmitted to the judgment "of men who had plain common ſenſe, without "the prejudices of a learned education. Let me "be repreſented as one who truſts his ſenſes, "who thinks he knows the things he ſees and "feels, and entertains no doubt of their exiſt-"ence.—If by material ſubſtance is meant only "ſenſible body, that which is ſeen and felt, (and "the unphiloſophical part of the world, I dare "ſay, mean no more), then I am more certain of "matter's exiſtence than you or any other Phi-"loſopher

" loſopher pretend to be. If there be any thing " which makes the generality of mankind averſe " from the notions I eſpouſe, it is a miſapprehen- " ſion that I deny the reality of ſenſible things: " But as it is you who are guilty of that and not " I, it follows, that, in truth, their averſion is " againſt your notions, and not mine.—I am " content to appeal to the common ſenſe of the " world for the truth of my notion.—I am of a " vulgar caſt, ſimple enough to believe my " ſenſes, and to leave things as I find them.—I " cannot, for my life, help thinking that ſnow " is white, and fire hot."

When HYLAS is at laſt entirely converted, he obſerves to PHILONOUS, " After all, the contro- " verſy about matter, in the ſtrict acceptation of " it, lies altogether between you and the Philo- " ſophers, whoſe principles, I acknowledge, are " not near ſo natural, or ſo agreeable to the com- " mon ſenſe of mankind, and Holy Scripture, as " yours." PHILONOUS obſerves in the end, " That he does not pretend to be a ſetter up of " new notions, his endeavours tend only to unite, " and to place in a clearer light, that truth which " was before ſhared between the vulgar and the " Philoſophers; the former being of opinion, " that thoſe things they immediately perceive " are the real things; and the latter, that the " things immediately perceived are ideas which " exiſt only in the mind; which two things put

" together do, in effect, conſtitute the ſubſtance " of what he advances :" And he concludes by obſerving, " That thoſe principles, which at firſt " view lead to ſcepticiſm, purſued to a certain " point, bring men back to common ſenſe."

Theſe paſſages ſhow ſufficiently the author's concern to reconcile his ſyſtem to the plain dictates of nature and common ſenſe, while he expreſſes no concern to reconcile it to the received doctrines of Philoſophers. He is fond to take part with the vulgar againſt the Philoſophers, and to vindicate common ſenſe againſt their innovations. What pity is it that he did not carry this ſuſpicion of the doctrine of Philoſophers ſo far as to doubt of that philoſophical tenet on which his whole ſyſtem is built, to wit, that the things immediately perceived by the ſenſes are ideas which exiſt only in the mind!

After all, it ſeems no eaſy matter to make the vulgar opinion and that of BERKELEY to meet. And to accompliſh this, he ſeems to me to draw each out of its line towards the other, not without ſome ſtraining.

The vulgar opinion he reduces to this, that the very things which we perceive by our ſenſes do really exiſt. This he grants: For theſe things, ſays he, are ideas in our minds, or complexions of ideas, to which we give one name, and conſider as one thing; theſe are the immediate objects of ſenſe, and theſe do really exiſt. As to the notion,

that

that thoſe things have an abſolute external exiſtence, independent of being perceived by any mind, he thinks that this is no notion of the vulgar, but a refinement of Philoſophers; and that the notion of material ſubſtance, as a *ſubſtratum*, or ſupport of that collection of ſenſible qualities to which we give the name of an apple or a melon, is likewiſe an invention of Philoſophers, and is not found with the vulgar till they are inſtructed by Philoſophers. The ſubſtance not being an object of ſenſe, the vulgar never think of it; or, if they are taught the uſe of the word, they mean no more by it but that collection of ſenſible qualities which they, from finding them conjoined in nature, have been accuſtomed to call by one name, and to conſider as one thing.

Thus he daws the vulgar opinion near to his own; and, that he may meet it half way, he acknowledges, that material things have a real exiſtence out of the mind of this or that perſon; but the queſtion, ſays he, between the materialiſt and me, is, Whether they have an abſolute exiſtence diſtinct from their being perceived by God, and exterior to all minds? This, indeed, he ſays, ſome Heathens and Philoſophers have affirmed; but whoever entertains notions of the Deity, ſuitable to the Holy Scripture, will be of another opinion.

But here an objection occurs, which it required all his ingenuity to anſwer. It is this: The ideas

ideas in my mind cannot be the ſame with the ideas of any other mind; therefore, if the objects I perceive be only ideas, it is impoſſible that the objects I perceive can exiſt any where, when I do not perceive them; and it is impoſſible that two or more minds can perceive the ſame object.

To this BERKELEY anſwers, that this objection preſſes no leſs the opinion of the materialiſt Philoſopher than his: But the difficulty is, to make his opinion coincide with the notions of the vulgar, who are firmly perſuaded, that the very identical objects which they perceive, continue to exiſt when they do not perceive them; and who are no leſs firmly perſuaded, that when ten men look at the ſun or the moon, they all ſee the ſame individual object.

To reconcile this repugnancy, he obſerves, Dial. 3. "That if the term *ſame* be taken in the "vulgar acceptation, it is certain, (and not at "all repugnant to the principles he maintains,) "that different perſons may perceive the ſame "thing; or the ſame thing or idea exiſt in dif-"ferent minds. Words are of arbitrary impo-"ſition; and ſince men are uſed to apply the "word *ſame*, where no diſtinction or variety is "perceived, and he does not pretend to alter "their perceptions, it follows, that as men have "ſaid before, *ſeveral ſaw the ſame thing;* ſo "they may, upon like occaſions, ſtill continue "to uſe the ſame phraſe without any deviation,

"either

" either from propriety of language or the truth
" of things: But if the term *ſame* be uſed in
" the acceptation of Philoſophers, who pretend
" to an abſtracted notion of identity, then,
" according to their ſundry definitions of this
" term, (for it is not yet agreed wherein that
" philoſophic identity conſiſts,) it may or may
" not be poſſible for divers perſons to perceive
" the ſame thing: But whether Philoſophers ſhall
" think fit to call a thing the *ſame* or no, is, I
" conceive, of ſmall importance. Men may diſ-
" pute about identity and diverſity, without any
" real difference in their thoughts and opinions,
" abſtracted from names."

Upon the whole, I apprehend that BERKELEY has carried this attempt to reconcile his ſyſtem to the vulgar opinion further than reaſon ſupports him: and he was no doubt tempted to do ſo, from a juſt apprehenſion that, in a controverſy of this kind, the common ſenſe of mankind is the moſt formidable antagoniſt.

BERKELEY has employed much pains and ingenuity to ſhow that his ſyſtem, if received and believed, would not be attended with thoſe bad conſequences in the conduct of life which ſuperficial thinkers may be apt to impute to it. His ſyſtem does not take away or make any alteration upon our pleaſures or our pains: Our ſenſations, whether agreeable or diſagreeable, are the ſame upon his ſyſtem as upon any other. Theſe are real

real things, and the only things that intereſt us. They are produced in us according to certain laws of nature, by which our conduct will be directed in attaining the one, and avoiding the other: And it is of no moment to us, whether they are produced immediately by the operation of ſome powerful intelligent being upon our minds, or by the mediation of ſome inanimate being which we call *matter*.

The evidence of an all-governing mind, ſo far from being weakened, ſeems to appear even in a more ſtriking light upon his hypotheſis, than upon the common one. The powers which inanimate matter is ſuppoſed to poſſeſs, have always been the ſtrong hold of Atheiſts, to which they had recourſe in defence of their ſyſtem. This fortreſs of atheiſm muſt be moſt effectually overturned, if there is no ſuch thing as matter in the univerſe. In all this the Biſhop reaſons juſtly and acutely. But there is one uncomfortable conſequence of his ſyſtem, which he ſeems not to have attended to, and from which it will be found difficult, if at all poſſible, to guard it.

The conſequence, I mean, is this, that, although it leaves us ſufficient evidence of a ſupreme intelligent mind, it ſeems to take away all the evidence we have of other intelligent beings like ourſelves. What I call a father, a brother, or a friend, is only a parcel of ideas in my own mind;

mind; and being ideas in my mind, they cannot poſſibly have that relation to another mind which they have to mine, any more than the pain felt by me can be the individual pain felt by another. I can find no principle in BERKELEY's ſyſtem, which affords me even probable ground to conclude, that there are other intelligent beings, like myſelf, in the relations of father, brother, friend, or fellow-citizen. I am left alone, as the only creature of GOD in the univerſe, in that forlorn ſtate of *egoiſm*, into which it is ſaid ſome of the diſciples of DES CARTES were brought by his philoſophy.

Of all the opinions that have ever been advanced by Philoſophers, this of Biſhop BERKELEY, that there is no material world, ſeems the ſtrangeſt, and the moſt apt to bring philoſophy into ridicule with plain men, who are guided by the dictates of nature and common ſenſe. And it will not, I apprehend, be improper to trace this progeny of the doctrine of ideas from its origin, and to obſerve its gradual progreſs, till it acquired ſuch ſtrength, that a pious and learned Biſhop had the boldneſs to uſher it into the world, as demonſtrable from the principles of philoſophy univerſally received, and as an admirable expedient for the advancement of knowledg n f r h defenc of rel gion.

During the eign of the Peripatetic philoſophy, men were little diſpoſed to doubt, and much to dogmatize.

dogmatize. The exiſtence of the objects of ſenſe was held as a firſt principle; and the received doctrine was, that the ſenſible ſpecies or idea is the very form of the external object, juſt ſeparated from the matter of it, and ſent into the mind that perceives it; ſo that we find no appearance of ſcepticiſm about the exiſtence of matter under that philoſophy.

DES CARTES taught men to doubt even of thoſe things that had been taken for firſt principles. He rejected the doctrine of ſpecies or ideas coming from objects; but ſtill maintained, that what we immediately perceive is not the external object, but an idea or image of it in our mind. This led ſome of his diſciples into egoiſm, and to diſbelieve the exiſtence of every creature in the univerſe but themſelves and their own ideas.

But DES CARTES himſelf, either from dread of the cenſure of the Church, which he took great care not to provoke, or to ſhun the ridicule of the world, which might have cruſhed his ſyſtem at once, as it did that of the Egoiſts; or, perhaps, from inward conviction, was reſolved to ſupport the exiſtence of matter. To do this conſiſtently with his principles, he found himſelf obliged to have recourſe to arguments that are far-fetched, and not very cogent. Sometimes he argues, that our ſenſes are given us by GOD, who is no deceiver; and therefore we ought

ought to believe their teſtimony. But this argument is weak; becauſe, according to his principles, our ſenſes teſtify no more but that we have certain ideas: And if we draw concluſions from this teſtimony, which the premiſes will not ſupport, we deceive ourſelves. To give more force to this weak argument, he ſometimes adds, that we have by nature a ſtrong propenſity to believe that there is an external world correſponding to our ideas.

MALEBRANCHE thought, that this ſtrong propenſity is not a ſufficient reaſon for believing the exiſtence of matter; and that it is to be received as an article of faith, not certainly diſcoverable by reaſon. He is aware that faith comes by hearing; and that it may be ſaid that Prophets, Apoſtles, and miracles, are only ideas in our minds. But to this he anſwers, That though theſe things are only ideas, yet faith turns them into realities; and this anſwer, he hopes, will ſatisfy thoſe who are not too moroſe.

It may perhaps ſeems ſtrange, that LOCKE, who wrote ſo much about ideas, ſhould not ſee thoſe conſequences which BERKELEY thought ſo obviouſly deducible from that doctrine. Mr LOCKE ſurely was not willing that the doctrine of ideas ſhould be thought to be loaded with ſuch conſequences. He acknowledges, that the exiſtence of a material world is not to be received as a firſt principle; nor is it demonſtrable; but

but he offers the beſt arguments for it he can; and ſupplies the weakneſs of his arguments by this obſervation, that we have ſuch evidence as is ſufficient to direct us in purſuing the good, and avoiding the ill we may receive from external things, beyond which we have no concern.

There is, indeed, a ſingle paſſage in LOCKE's Eſſay, which may lead one to conjecture, that he had a glimpſe of that ſyſtem which BERKELEY afterwards advanced, but thought proper to ſuppreſs it within his own breaſt. The paſſage is in book 4. chap. 10. where, having proved the exiſtence of an eternal intelligent mind, he comes to anſwer thoſe who conceive that matter alſo muſt be eternal; becauſe we cannot conceive how it could be made out of nothing: And having obſerved that the creation of minds requires no leſs power than the creation of matter, he adds what follows: "Nay, poſſibly, if "we could emancipate ourſelves from vulgar "notions, and raiſe our thoughts, as far as they "would reach, to a cloſer contemplation of "things, we might be able to aim at ſome dim "and ſeeming conception, how matter might at "firſt be made, and begin to exiſt by the power of "that eternal firſt Being; but to give beginning "and being to a ſpirit, would be found a more "inconceivable effect of omnipotent power. "But this being what would perhaps lead us too "far from the notions on which the philoſophy "now

" now in the world is built, it would not be " pardonable to deviate ſo far from them, or to " inquire, ſo far as grammar itſelf would autho- " riſe, if the common ſettled opinion oppoſes it; " eſpecially in this place, where the received " doctrine ſerves well enough to our preſent pur- " poſe."

It appears from this paſſage, *firſt*, That Mr LOCKE had ſome ſyſtem in his mind, perhaps not fully digeſted, to which we might be led, by raiſing our thoughts to a cloſer contemplation of things, and emancipating them from vulgar notions. *Secondly*, That this ſyſtem would lead ſo far from the notions on which the philoſophy now in the world is built, that he thought proper to keep it within his own breaſt. *Thirdly*, That it might be doubted whether this ſyſtem differed ſo far from the common ſettled opinion in reality, as it ſeemed to do in words. *Fourthly*, By this ſyſtem, we might poſſibly be enabled to aim at ſome dim and ſeeming conception how matter might at firſt be made and begin to exiſt; but it would give no aid in conceiving how a ſpirit might be made. Theſe are the characteriſtics of that ſyſtem which Mr LOCKE had in his mind, and thought it prudent to ſuppreſs. May they not lead to a probable conjecture, that it was the ſame, or ſomething ſimilar to that of Biſhop BERKELEY? According to BERKELEY's ſyſtem, GOD's creating the mate-

rial world at ſuch a time, means no more but that he decreed from that time, to produce ideas in the minds of finite ſpirits, in that order, and according to thoſe rules, which we call the laws of Nature. This, indeed, removes all difficulty, in conceiving how matter was created; and BERKELEY does not fail to take notice of the advantage of his ſyſtem on that account. But his ſyſtem gives no aid in conceiving how a ſpirit may be made. It appears, therefore, that every particular Mr LOCKE has hinted, with regard to that ſyſtem which he had in his mind, but thought it prudent to ſuppreſs, tallies exactly with the ſyſtem of BERKELEY. If we add to this, that BERKELEY's ſyſtem follows from Mr LOCKE's, by very obvious conſequence, it ſeems reaſonable to conjecture, from the paſſage now quoted, that he was not unaware of that conſequence, but left it to thoſe who ſhould come after him to carry his principles their full length, when they ſhould by time be better eſtabliſhed, and able to bear the ſhock of their oppoſition to vulgar notions. Mr NORRIS, in his Eſſay towards the theory of the ideal or intelligible world, publiſhed in 1701, obſerves, that the material world is not an object of ſenſe; becauſe ſenſation is within us, and has no object. Its exiſtence, therefore, he ſays, is a collection of reaſon, and not a very evident one.

From

From this detail we may learn, that the doctrine of ideas, as it was new modelled by DES CARTES, looked with an unfriendly aſpect upon the material world; and although Philoſophers were very unwilling to give up either, they found it a very difficult taſk to reconcile them to each other. In this ſtate of things BERKELEY, I think, is reputed the firſt who had the daring reſolution to give up the material world altogether, as a ſacrifice to the received philoſophy of ideas.

But we ought not in this hiſtorical ſketch to omit an author of far inferior name, ARTHUR COLLIER, Rector of Langford Magna, near Sarum. He publiſhed a book in 1713, which he calls *Clavis Univerſalis;* or, a new Enquiry after Truth; being a demonſtration of the non-exiſtence or impoſſibility of an external world. His arguments are the ſame in ſubſtance with BERKELEY'S; and he appears to underſtand the whole ſtrength of his cauſe. Though he is not deficient in metaphyſical acuteneſs, his ſtyle is diſagreeable, being full of conceits, of new coined words, ſcholaſtic terms, and perplexed ſentences. He appears to be well acquainted with DES CARTES, MALEBRANCHE, and NORRIS, as well as with ARISTOTLE and the ſchoolmen: But, what is very ſtrange, it does not appear that he had ever heard of LOCKE'S Eſſay, which had been publiſhed twenty-four years, or of BERKE-

LEY's Principles of Knowledge, which had been publiſhed three years.

He ſays, he had been ten years firmly convinced of the non-exiſtence of an external world, before he ventured to publiſh his book. He is far from thinking as BERKELEY does, that the vulgar are of his opinion. If his book ſhould make any converts to his ſyſtem, (of which he expreſſes little hope, though he has ſupported it by nine demonſtrations,) he takes pains to ſhow that his diſciples, notwithſtanding their opinion, may, with the unenlightened, ſpeak of material things in the common ſtyle. He himſelf had ſcruples of conſcience about this for ſome time; and if he had not got over them, he muſt have ſhut his lips for ever: But he conſidered, that GOD himſelf has uſed this ſtyle in ſpeaking to men in the Holy Scripture, and has thereby ſanctified it to all the faithful; and that to the pure all things are pure. He thinks his opinion may be of great uſe, eſpecially in religion; and applies it in particular, to put an end to the controverſy about CHRIST's preſence in the ſacrament.

I have taken the liberty to give this ſhort account of COLLIER's book, becauſe I believe it is rare, and little known. I have only ſeen one copy of it, which is in the Univerſity library of Glaſgow.

CHAP.

CHAP. XI.

Biſhop BERKELEY'S *Sentiments of the Nature of Ideas.*

I PASS over the ſentiments of Biſhop BERKELEY, with reſpect to abſtract ideas, and with reſpect to ſpace and time, as things which may more properly be conſidered in another place. But I muſt take notice of one part of his ſyſtem, wherein he ſeems to have deviated from the common opinion about ideas.

Though he ſets out in his Principles of Knowledge by telling us, that it is evident the objects of human knowledge are ideas, and builds his whole ſyſtem upon this principle; yet, in the progreſs of it, he finds that there are certain objects of human knowledge that are not ideas, but things which have a permanent exiſtence. The objects of knowledge, of which we have no ideas, are our own minds, and their various operations, other finite minds, and the Supreme Mind. The reaſon why there can be no ideas of ſpirits and their operations, the author informs us is this, That ideas are paſſive, inert, unthinking beings; they cannot therefore be the image or likeneſs of things that have thought, and will, and active power; we have notions of

minds, and of their operations, but not ideas: We know what we mean by thinking, willing, and perceiving; we can reaſon about beings endowed with thoſe powers, but we have no ideas of them. A ſpirit or mind is the only ſubſtance or ſupport wherein the unthinking beings or ideas can exiſt; but that this ſubſtance, which ſupports or perceives ideas, ſhould itſelf be an idea, or like an idea, is evidently abſurd.

He obſerves further, Princip. ſect. 142. that "all relations including an act of the mind, we "cannot properly be ſaid to have an idea, but "rather a notion of the relations or habitudes "between things. But if, in the modern way, "the word idea is extended to ſpirits, and rela- "tions, and acts, this is, after all, an affair of "verbal concern; yet it conduces to clearneſs "and propriety, that we diſtinguiſh things very "different by different names."

This is an important part of BERKELEY's ſyſtem, and deſerves attention. We are led by it to divide the objects of human knowledge into two kinds: The firſt is ideas, which we have by our five ſenſes; they have no exiſtence when they are not perceived, and exiſt only in the minds of thoſe who perceive them. The ſecond kind of objects comprehends ſpirits, their acts, and the relations and habitudes of things. Of theſe we have notions, but no ideas. No idea can repreſent them, or have any ſimilitude to them:

them: Yet we underſtand what they mean, and we can ſpeak with underſtanding, and reaſon about them, without ideas.

This account of ideas is very different from that which LOCKE has given. In his ſyſtem, we have no knowledge where we have no ideas. Every thought muſt have an idea for its immediate object. In BERKELEY'S, the moſt important objects are known without ideas. In LOCKE'S ſyſtem, there are two ſources of our ideas, ſenſation and reflection. In BERKELEY'S, ſenſation is the only ſource, becauſe of the objects of reflection there can be no ideas. We know them without ideas. LOCKE divides our ideas into thoſe of ſubſtances, modes, and relations. In BERKELEY'S ſyſtem, there are no ideas of ſubſtances, or of relations; but notions only. And even in the claſs of modes, the operations of our own minds are things of which we have diſtinct notions; but no ideas.

We ought to do the juſtice to MALEBRANCHE to acknowledge, that in this point, as well as in many others, his ſyſtem comes nearer to BERKELEY'S than the latter ſeems willing to own. That author tells us, that there are four different ways in which we come to the knowledge of things. To know things by their ideas, is only one of the four. He affirms, that we have no idea of our own mind, or any of its modifications: That we know theſe things by conſciouſneſs, without ideas. Whether theſe two acute Philoſophers

foreſaw the conſequences that may be drawn from the ſyſtem of ideas, taken in its full extent, and which were afterwards drawn by Mr HUME, I cannot pretend to ſay. If they did, their regard to religion was too great to permit them to admit thoſe conſequences, or the principles with which they were neceſſarily connected.

However this may be, if there be ſo many things that may be apprehended and known without ideas, this very naturally ſuggeſts a ſcruple with regard to thoſe that are left: For it may be ſaid, If we can apprehend and reaſon about the world of ſpirits, without ideas, Is it not poſſible that we may apprehend and reaſon about a material world, without ideas? If conſciouſneſs and reflection furniſh us with notions of ſpirits, and of their attributes, without ideas, May not our ſenſes furniſh us with notions of bodies and their attributes, without ideas?

BERKELEY foreſaw this objection to his ſyſtem, and puts it in the mouth of HYLAS, in the following words: Dial. 3. HYLAS. "If you can "conceive the mind of GOD, without having an "idea of it, Why may not I be allowed to con- "ceive the exiſtence of matter, notwithſtanding "that I have no idea of it?" The anſwer of PHILONOUS is, "You neither perceive matter "objectively, as you do an inactive being or "idea, nor know it, as you do yourſelf, by a re- "flex act, neither do you immediately appre- "hend it by ſimilitude of the one or the other,

"nor

" nor yet collect it by reaſoning from that which " you know immediately. All which makes " the caſe of matter widely different from that " of the Deity."

Though HYLAS declares himſelf ſatisfied with this anſwer, I confeſs I am not: Becauſe, if I may truſt the faculties that GOD has given me, I do perceive matter objectively, that is, ſomething which is extended and ſolid, which may be meaſured and weighed, is the immediate object of my touch and ſight. And this object I take to be matter, and not an idea. And though I have been taught by Philoſophers, that what I immediately touch is an idea, and not matter; yet I have never been able to diſcover this by the moſt accurate attention to my own perceptions.

It were to be wiſhed, that this ingenious author had explained what he means by ideas, as diſtinguiſhed from notions. The word notion, being a word in common language, is well underſtood. All men mean by it, the conception, the apprehenſion, or thought which we have of any object of thought. A notion, therefore, is an act of the mind conceiving or thinking of ſome object. The object of thought may be either ſomething that is in the mind, or ſomething that is not in the mind. It may be ſomething that has no exiſtence, or ſomething that did, or does, or ſhall exiſt. But the notion which I have of that object, is an act of my

my mind which really exiſts while I think of the object; but has no exiſtence when I do not think of it. The word idea, in popular language, has preciſely the ſame meaning as the word notion. But Philoſophers have another meaning to the word idea; and what that meaning is, I think, is very difficult to ſay.

The whole of Biſhop BERKELEY's ſyſtem depends upon the diſtinction between notions and ideas; and therefore it is worth while to find, if we are able, what thoſe things are which he call ideas, as diſtinguiſhed from notions.

For this purpoſe, we may obſerve, that he takes notice of two kinds of ideas, the ideas of ſenſe, and the ideas of imagination. "The ideas imprinted "on the ſenſes by the Author of Nature, he ſays, "are called real things; and thoſe excited in the "imagination, being leſs regular, vivid and con- "ſtant, are more properly termed ideas, or "images of things, which they copy and repre- "ſent. But then our ſenſations, be they never "ſo vivid and diſtinct, are nevertheleſs ideas; "that is, they exiſt in the mind, or are per- "ceived by it as truly as the ideas of its own "framing. The ideas of ſenſe are allowed to "have more reality in them; that is, to be "more ſtrong, orderly, and coherent, than the "creatures of the mind. They are alſo leſs de- "pendent on the ſpirit, or thinking ſubſtance "which perceives them, in that they are exci-

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" ted by the will of another and more powerful " ſpirit; yet ſtill they are ideas; and certainly " no idea, whether faint or ſtrong, can exiſt, " otherwiſe than in a mind perceiving it." Princip. ſect. 33.

From this paſſage we ſee, that, by the ideas of ſenſe, the author means ſenſations: And this indeed is evident from many other paſſages, of which I ſhall mention a few, Princip. ſect. 5. " Light and colours, heat and cold, extenſion " and figure, in a word, the things we ſee and " feel, what are they but ſo many ſenſations, " notions, ideas, or impreſſions on the ſenſe; " and is it poſſible to ſeparate, even in thought, " any of theſe from perception? For my part, " I might as eaſily divide a thing from itſelf." Sect. 18. " As for our ſenſes, by them we have " the knowledge only of our ſenſations, ideas, or " thoſe things that are immediately perceived " by ſenſe; call them what you will: But they " do not inform us that things exiſt without the " mind, or unperceived, like to thoſe which are " perceived." Sect. 25. " All our ideas, ſenſa- " tions, or the things which we perceive, by " whatever names they may be diſtinguiſhed, " are viſibly inactive; there is nothing of power " or agency included in them."

This therefore appears certain, that, by the ideas of ſenſe, the author meant the ſenſations we have by means of our ſenſes. I have endea-

voured

voured to explain the meaning of the word *ſenſation*, Eſſay I. chap. I. and refer to the explication there given of it, which appears to me to be perfectly agreeable to the ſenſe in which Biſhop BERKELEY uſes it.

As there can be no notion or thought but in a thinking being; ſo there can be no ſenſation but in a ſentient being. It is the act, or feeling of a ſentient being; its very eſſence conſiſts in its being felt. Nothing can reſemble a ſenſation, but a ſimilar ſenſation in the ſame, or in ſome other mind. To think that any quality in a thing that is inanimate can reſemble a ſenſation, is a great abſurdity. In all this, I cannot but agree perfectly with Biſhop BERKELEY; and I think his notions of ſenſation much more diſtinct and accurate than LOCKE's, who thought that the primary qualities of body are reſemblances of our ſenſations, but that the ſecondary are not.

That we have many ſenſations by means of our external ſenſes, there can be no doubt; and if he is pleaſed to call thoſe ideas, there ought to be no diſpute about the meaning of a word. But, ſays Biſhop BERKELEY, by our ſenſes, we have the knowledge *only* of our ſenſations or ideas, call them which you will. I allow him to call them which he will; but I would have the word *only* in this ſentence to be well weighed, becauſe a great deal depends upon it.

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For if it be true, that, by our ſenſes, we have the knowledge of our ſenſations only, then his ſyſtem muſt be admitted, and the exiſtence of a material world muſt be given up as a dream. No demonſtration can be more invincible than this. If we have any knowledge of a material world, it muſt be by the ſenſes: But, by the ſenſes, we have no knowledge but of our ſenſations only; and our ſenſations have no reſemblance of any thing that can be in a material world. The only propoſition in this demonſtration which admits of doubt is, that, by our ſenſes, we have the knowledge of our ſenſations only, and of nothing elſe. If there are objects of the ſenſes which are not ſenſations, his arguments do not touch them; they may be things which do not exiſt in the mind, as all ſenſations do; they may be things, of which, by our ſenſes, we have notions, though no ideas; juſt as, by conſciouſneſs and reflection, we have notions of ſpirits, and of their operations, without ideas or ſenſations.

Shall we ſay then, that, by our ſenſes, we have the knowledge of our ſenſations only; and that they give us no notion of any thing but of our ſenſations? Perhaps this has been the doctrine of Philoſophers, and not of Biſhop BERKELEY alone, otherwiſe he would have ſupported it by arguments. Mr LOCKE calls all the notions we have by our ſenſes ideas of ſenſation; and in this

this has been very generally followed. Hence it ſeems a very natural inference, that ideas of ſenſation are ſenſations. But Philoſophers may err: Let us hear the dictates of common ſenſe upon this point.

Suppoſe I am pricked with a pin, I aſk, Is the pain I feel, a ſenſation? undoubtedly it is. There can be nothing that reſembles pain in any inanimate being. But I aſk again, Is the pin a ſenſation? To this queſtion I find myſelf under a neceſſity of anſwering, That the pin is not a ſenſation, nor can have the leaſt reſemblance to any ſenſation. The pin has length and thickneſs, and figure and weight. A ſenſation can have none of thoſe qualities. I am not more certain that the pain I feel is a ſenſation, than that the pin is not a ſenſation; yet the pin is an object of ſenſe; and I am as certain that I perceive its figure and hardneſs by my ſenſes, as that I feel pain when pricked by it.

Having ſaid ſo much of the ideas of ſenſe in BERKELEY's ſyſtem, we are next to conſider the account he gives of the ideas of imagination. Of theſe he ſays, Princip. ſect. 28. "I find I "can excite ideas in my mind at pleaſure, and "vary and ſhift the ſcene as oft as I think fit. "It is no more than willing; and ſtraightway "this or that idea ariſes in my fancy; and by "the ſame power it is obliterated, and makes "way for another. This making and unma-

"king

" king of ideas, doth very properly denominate " the mind active. This much is certain, and " grounded on experience. Our ſenſations, he " ſays, are called real things; the ideas of ima- " gination are more properly termed ideas, or " images of things;" that is, as I apprehend, they are the images of our ſenſations. It might ſurely be expected, that we ſhould be well acquainted with the ideas of imagination, as they are of our making; yet, after all the Biſhop has ſaid about them, I am at a loſs to know what they are.

I would obſerve, in the *firſt* place, with regard to theſe ideas of imagination, that they are not ſenſations; for ſurely ſenſation is the work of the ſenſes, and not of imagination; and though pain be a ſenſation, the thought of pain, when I am not pained, is no ſenſation.

I obſerve, in the *ſecond* place, that I can find no diſtinction between ideas of imagination and notions, which the author ſays are not ideas. I can eaſily diſtinguiſh between a notion and a ſenſation. It is one thing to ſay I have the ſenſation of pain. It is another thing to ſay I have a notion of pain. The laſt expreſſion ſignifies no more than that I underſtand what is meant by the word *pain*. The firſt ſignifies that I really feel pain. But I can find no diſtinction between the notion of pain, and the imagination of it, or indeed between the notion of any thing

thing elſe, and the imagination of it. I can therefore give no account of the diſtinction which BERKELEY makes between ideas of imagination, and notions, which he ſays are not ideas. They ſeem to me perfectly to coincide.

He ſeems indeed to ſay, that the ideas of imagination differ not in kind from thoſe of the ſenſes, but only in the degree of their regularity, vivacity, and conſtancy. "They are, ſays "he, leſs regular, vivid, and conſtant." This doctrine was afterwards greedily embraced by Mr HUME, and makes a main pillar of his ſyſtem; but it cannot be reconciled to common ſenſe, to which Biſhop BERKELEY profeſſes a great regard. For, according to this doctrine, if we compare the ſtate of a man racked with the gout, with his ſtate, when being at perfect eaſe, he relates what he has ſuffered; the difference of theſe two ſtates is only this, that, in the laſt, the pain is leſs regular, vivid, and conſtant, than in the firſt. We cannot poſſibly aſſent to this. Every man knows that he can relate the pain he ſuffered, not only without pain, but with pleaſure; and that to ſuffer pain, and to think of it, are things which totally differ in kind, and not in degree only.

We ſee, therefore, upon the whole, that according to this ſyſtem; of the moſt important objects of knowledge, that is, of ſpirits, of their operations, and of the relations of things, we have

have no ideas at all; we have notions of them, but not ideas: The ideas we have are thoſe of ſenſe, and thoſe of imagination. The firſt are the ſenſations we have by means of our ſenſes, whoſe exiſtence no man can deny, becauſe he is conſcious of them; and whoſe nature hath been explained by this author with great accuracy. As to the ideas of imagination, he hath left us much in the dark: He makes them images of our ſenſations, though, according to his own doctrine, nothing can reſemble a ſenſation but a ſenſation. He ſeems to think, that they differ from ſenſations only in the degree of their regularity, vivacity, and conſtancy: But this cannot be reconciled to the experience of mankind; and beſides this mark, which cannot be admitted, he hath given us no other mark by which they may be diſtinguiſhed from notions: Nay, it may be obſerved, that the very reaſon he gives why we can have no ideas of the acts of the mind about its ideas, nor of the relations of things, is applicable to what he calls ideas of imagination. Princip. ſect. 142. "We may not, "I think, ſtrictly be ſaid to have an idea of "an active being, or of an action, although we "may be ſaid to have a notion of them. I have "ſome knowledge or notion of my mind, and its "acts about ideas, in as much as I know or un-"derſtand what is meant by theſe words. It "is alſo to be remarked, that all relations in-

" cluding an act of the mind, we cannot ſo pro-
" perly be ſaid to have an idea, but rather
" a notion of the relations and habitudes be-
" tween things." From this it follows, that our imaginations are not properly ideas but notions, becauſe they include an act of the mind. For he tells us, in a paſſage already quoted, that they are creatures of the mind, of its own framing, and that it makes and unmakes them as it thinks fit, and from this is properly denominated active. If it be a good reaſon why we have not ideas, but notions only of relations, becauſe they include an act of the mind; the ſame reaſon muſt lead us to conclude, that our imaginations are notions and not ideas, ſince they are made and unmade by the mind as it thinks fit, and from this it is properly denominated active.

When ſo much has been written, and ſo many diſputes raiſed, about ideas, it were deſirable that we knew what they are, and to what category or claſs of beings they belong. In this we might expect ſatisfaction in the writings of Biſhop BERKELEY, if any where, conſidering his known accuracy and preciſion in the uſe of words; and it is for this reaſon that I have taken ſo much pains to find out what he took them to be.

After all, if I underſtand what he calls the ideas of ſenſe, they are the ſenſations which we have

have by means of our five ſenſes; but they are, he ſays, leſs properly termed ideas.

I underſtand likewiſe what he calls notions, but they, ſays he, are very diffèrent from ideas, though, in the modern way, often called by that name.

The ideas of imagination remain, which are moſt properly termed ideas, as he ſays; and, with regard to theſe, I am ſtill very much in the dark. When I imagine a lion or an elephant, the lion or elephant is the object imagined. The act of the mind, in conceiving that object, is the notion, the conception, or imagination of the object. If beſides the object, and the act of the mind about it, there be ſomething called the idea of the object, I know not what it is.

If we conſult other authors who have treated of ideas, we ſhall find as little ſatisfaction with regard to the meaning of this philoſophical term, The vulgar have adopted it; but they only mean by it the notion or conception we have of any object, eſpecially our more abſtract or general notions. When it is thus put to ſignify the operation of the mind about objects, whether in conceiving, remembering, or perceiving, it is well underſtood. But Philoſophers will have ideas to be the objects of the mind's operations, and not the operations themſelves. There is, indeed, great variety of objects of thought. We can

think of minds, and of their operations, of bodies, and of their qualities and relations. If ideas are not comprehended under any of theſe claſſes, I am at a loſs to comprehend what they are.

In ancient philoſophy, ideas were ſaid to be immaterial forms, which, according to one ſyſtem, exiſted from all eternity, and, according to another, are ſent forth from the objects, whoſe form they are. In modern philoſophy, they are things in the mind, which are the immediate objects of all our thoughts, and which have no exiſtence when we do not think of them. They are called the images, the reſemblances, the repreſentatives of external objects of ſenſe; yet they have neither colour, nor ſmell, nor figure, nor motion, nor any ſenſible quality. I revere the authority of Philoſophers, eſpecially where they are ſo unanimous; but until I can comprehend what they mean by ideas, I muſt think and ſpeak with the vulgar.

In ſenſation, properly ſo called, I can diſtinguiſh two things, the mind or ſentient being, and the ſenſation. Whether the laſt is to be called a feeling or an operation, I diſpute not; but it has no object diſtinct from the ſenſation itſelf. If in ſenſation there be a third thing, called an idea, I know not what it is.

In perception, in remembrance, and in conception, or imagination, I diſtinguiſh three things,

things, the mind that operates, the operation of the mind, and the object of that operation. That the object perceived is one thing, and the perception of that object another, I am as certain as I can be of any thing. The ſame may be ſaid of conception, of remembrance, of love and hatred, of deſire and averſion. In all theſe, the act of the mind about its object is one thing, the object is another thing. There muſt be an object, real or imaginary, diſtinct from the operation of the mind about it. Now, if in theſe operations the idea be a fourth thing different from the three I have mentioned, I know not what it is, nor have been able to learn from all that has been written about ideas. And if the doctrine of Philoſophers about ideas confounds any two of theſe things, which I have mentioned as diſtinct; if, for example, it confounds the object perceived with the perception of that object, and repreſents them as one and the ſame thing, ſuch doctrine is altogether repugnant to all that I am able to diſcover of the operations of my own mind; and it is repugnant to the common ſenſe of mankind, expreſſed in the ſtructure of all languages.

CHAP. XII.

Of the Sentiments of Mr HUME.

TWO volumes of the Treatiſe of Human Nature were publiſhed in 1739, and the third in 1740. The doctrine contained in this Treatiſe was publiſhed anew in a more popular form in Mr HUME's Philoſophical Eſſays, of which there have been various editions. What other authors, from the time of DES CARTES, had called *ideas*, this author diſtinguiſhed into two kinds, to wit, *impreſſions* and *ideas*; comprehending under the firſt, all our ſenſations, paſſions, and emotions; and under the laſt, the faint images of theſe, when we remember or imagine them.

He ſets out with this, as a principle that needed no proof, and of which therefore he offers none, That all the perceptions of the human mind reſolve themſelves into theſe two kinds, *impreſſions* and *ideas*.

As this propoſition is the foundation upon which the whole of Mr HUME's ſyſtem reſts, and from which it is raiſed with great acuteneſs indeed, and ingenuity, it were to be wiſhed that he had told us upon what authority this fundamental propoſition reſts. But we are left to gueſs,

gueſs, whether it is held forth as a firſt principle, which has its evidence in itſelf; or whether it is to be received upon the authority of Philoſophers.

Mr LOCKE had taught us, that all the immediate objects of human knowledge are ideas in the mind. Biſhop BERKELEY, proceeding upon this foundation, demonſtrated very eaſily, that there is no material world. And he thought, that, for the purpoſes both of philoſophy and religion, we ſhould find no loſs, but great benefit, in the want of it. But the Biſhop, as became his order, was unwilling to give up the world of ſpirits. He ſaw very well, that ideas are as unfit to repreſent ſpirits as they are to repreſent bodies. Perhaps he ſaw, that if we perceive only the ideas of ſpirits, we ſhall find the ſame difficulty in inferring their real exiſtence from the exiſtence of their ideas, as we find in inferring the exiſtence of matter from the idea of it; and therefore, while he gives up the material world in favour of the ſyſtem of ideas, he gives up one half of that ſyſtem in favour of the world of ſpirits; and maintains, that we can, without ideas, think, and ſpeak, and reaſon, intelligibly about ſpirits, and what belongs to them.

Mr HUME ſhows no ſuch partiality in favour of the world of ſpirits. He adops the theory of ideas in its full extent; and, in conſequence, ſhews that there is neither matter nor mind in

the univerſe; nothing but impreſſions and ideas. What we call a *body*, is only a bundle of ſenſations; and what we call the *mind*, is only a bundle of thoughts, paſſions, and emotions, without any ſubject.

Some ages hence, it will perhaps be looked upon as a curious anecdote, that two Philoſophers of the 18th century, of very diſtinguiſhed rank, were led by a philoſophical hypotheſis; one, to diſbelieve the exiſtence of matter; and the other, to diſbelieve the exiſtence both of matter and of mind. Such an anecdote may not be uninſtructive, if it prove a warning to Philoſophers to beware of hypotheſes, eſpecially when they lead to concluſions which contradict the principles, upon which all men of common ſenſe muſt act in common life.

The Egoiſts, whom we mentioned before, were left far behind by Mr HUME; for they believed their own exiſtence, and perhaps alſo the exiſtence of a Deity. But Mr HUME's ſyſtem does not even leave him a *ſelf* to claim the property of his impreſſions and ideas.

A ſyſtem of conſequences, however abſurd, acutely and juſtly drawn from a few principles, in very abſtract matters, is of real utility in ſcience, and may be made ſubſervient to real knowledge. This merit Mr HUME's metaphyſical writings have in a great degree.

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We had occaſion before to obſerve, that, ſince the time of DES CARTES, Philoſophers, in treating of the powers of the mind, have in many inſtances confounded things, which the common ſenſe of mankind has always led them to diſtinguiſh, and which have different names in all languages. Thus, in the perception of an external object, all languages diſtinguiſh three things, the *mind* that perceives, the operation of that mind, which is called *perception*, and the *object* perceived. Nothing appears more evident to a mind untutored by philoſophy, than that theſe three are diſtinct things, which, though related, ought never to be confounded. The ſtructure of all languages ſuppoſes this diſtinction, and is built upon it. Philoſophers have introduced a fourth thing in this proceſs, which they call the *idea* of the object, which is ſuppoſed to be an image, or repreſentative of the object, and is ſaid to be the immediate object. The vulgar know nothing about this idea; it is a creature of philoſophy, introduced to account for, and explain, the manner of our perceiving external objects.

It is pleaſant to obſerve, that while Philoſophers, for more than a century, have been labouring, by means of ideas, to explain perception, and the other operations of the mind, thoſe ideas have by degrees uſurped the place of perception, object, and even of the mind itſelf, and have ſupplanted thoſe very things they were brought

brought to explain. DES CARTES reduced all the operations of the underſtanding to perception; and what can be more natural to thoſe who believe that they are only different modes of perceiving ideas in our own minds. LOCKE confounds ideas ſometimes with the perception of an external object, ſometimes with the external object itſelf. In BERKELEY'S ſyſtem, the idea is the only object, and yet is often confounded with the perception of it. But in HUME'S, the idea or the impreſſion, which is only a more lively idea, is mind, perception, and object, all in one: So that, by the term perception in Mr HUME'S ſyſtem, we muſt underſtand the mind itſelf, all its operations, both of underſtanding and will, and all the objects of theſe operations. Perception taken in this ſenſe he divides into our more lively perceptions, which he calls *impreſſions*, and the leſs lively, which he calls *ideas*. To prevent repetition, I muſt here refer the reader to ſome remarks made upon this diviſion, Eſſay I. chap. I. in the explication there given of the words *perceive*, *object*, *impreſſion*.

Philoſophers have differed very much with regard to the origin of our ideas, or the ſources whence they are derived. The Peripatetics held, that all knowledge is derived originally from the ſenſes; and this ancient doctrine ſeems to be revived by ſome late French Philoſophers, and by Dr HARTLEY and Dr PRIESTLY among the Britiſh.

tiſh. DES CARTES maintained, that many of our ideas are innate. LOCKE oppoſed the doctrine of innate ideas with much zeal, and employs the whole firſt book of his Eſſay againſt it. But he admits two different ſources of ideas; the operations of our external ſenſes, which he calls *ſenſation*, by which we get all our ideas of body, and its attributes; and *reflection* upon the operations of our minds, by which we get the ideas of every thing belonging to the mind. The main deſign of the ſecond book of LOCKE's Eſſay, is to ſhow, that all our ſimple ideas, without exception, are derived from the one or the other, or both of theſe ſources. In doing this, the author is led into ſome paradoxes, although, in general, he is not fond of paradoxes: And had he foreſeen all the conſequences that may be drawn from his account of the origin of our ideas, he would probably have examined it more carefully.

Mr HUME adopts LOCKE's account of the origin of our ideas, and from that principle infers, that we have no idea of ſubſtance corporeal or ſpiritual, no idea of power, no other idea of a cauſe, but that it is ſomething antecedent, and conſtantly conjoined to that which we call its effect; and, in a word, that we can have no idea of any thing but our ſenſations, and the operations of mind we are conſcious of.

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This author leaves no power to the mind in framing its ideas and impreſſions; and no wonder, ſince he holds that we have no idea of power; and the mind is nothing but that ſucceſſion of impreſſions and ideas of which we are intimately conſcious.

He thinks, therefore, that our impreſſions ariſe from unknown cauſes, and that the impreſſions are the cauſes of their correſponding ideas. By this he means no more but that they always go before the ideas; for this is all that is neceſſary to conſtitute the relation of cauſe and effect.

As to the order and ſucceſſion of our ideas, he holds it to be determined by three laws of attraction or aſſociation, which he takes to be original properties of the ideas, by which they attract, as it were, or aſſociate themſelves with other ideas which either reſemble them, or which have been contiguous to them in time and place, or to which they have the relations of cauſe and effect.

We may here obſerve by the way, that the laſt of theſe three laws ſeems to be included in the ſecond, ſince cauſation, according to him, implies no more than contiguity in time and place.

It is not my deſign at preſent to ſhow how Mr HUME, upon the principles he has borrowed from LOCKE and BERKELEY, has, with great acuteneſs, reared a ſyſtem of abſolute ſcepticiſm, which leaves no rational ground to believe any one

one propoſition, rather than its contrary: My intention in this place being only to give a detail of the ſentiments of Philoſophers concerning ideas ſince they became an object of ſpeculation, and concerning the manner of our perceiving external objects by their means.

CHAP. XIII.

Of the Sentiments of ANTONY ARNAULD.

IN this ſketch of the opinions of Philoſophers concerning ideas, we muſt not omit ANTONY ARNAULD, doctor of the Sorbonne, who, in the year 1683, publiſhed his book of True and Falſe Ideas, in oppoſition to the ſyſtem of MALEBRANCHE, before mentioned. It is only about ten years ſince I could find this book, and I believe it is rare.

Though ARNAULD wrote before LOCKE, BERKELEY, and HUME, I have reſerved to the laſt place ſome account of his ſentiments, becauſe it ſeems difficult to determine whether he adopted the common theory of ideas, or whether he is ſingular in rejecting it altogether as a fiction of Philoſophers.

The controverſy between MALEBRANCHE and ARNAULD neceſſarily led them to conſider what kind

kind of things ideas are, a point upon which other Philoſophers had very generally been ſilent. Both of them profeſſed the doctrine univerſally received, that we perceive not material things immediately, that it is their ideas that are the immediate objects of our thought, and that it is in the idea of every thing that we perceive its properties.

It is neceſſary to premiſe, that both theſe authors uſe the word *perception*, as DES CARTES had done before them, to ſignify every operation of the underſtanding. "To think, to know, to "perceive, are the ſame thing," ſays Mr ARNAULD, chap. 5. def. 2. It is likewiſe to be obſerved, that the various operations of the mind are by both called modifications of the mind. Perhaps they were led into this phraſe by the Carteſian doctrine, that the eſſence of the mind conſiſts in thinking, as that of body conſiſts in extention. I apprehend, therefore, that when they make ſenſation, perception, memory, and imagination, to be various modifications of the mind, they mean no more, but that theſe are things which can only exiſt in the mind as their ſubject. We expreſs the ſame thing, by calling them various modes of thinking, or various operations of the mind.

The things which the mind perceives, ſays MALEBRANCHE, are of two kinds. They are either

either in the mind itſelf, or they are external to it. The things in the mind, are all its different modifications, its ſenſations, its imaginations, its pure intellections, its paſſions and affections. Theſe are immediately perceived; we are conſcious of them, and have no need of ideas to repreſent them to us.

Things external to the mind, are either corporeal or ſpiritual. With regard to the laſt, he thinks it poſſible, that, in another ſtate, ſpirits may be an immediate object of our underſtandings, and ſo be perceived without ideas; that there may be ſuch an union of ſpirits as that they may immediately perceive each other, and communicate their thoughts mutually, without ſigns, and without ideas.

But leaving this as a problematical point, he holds it to be undeniable, that material things cannot be perceived immediately, but only by the mediation of ideas. He thought it likewiſe undeniable, that the idea muſt be immediately preſent to the mind, that it muſt touch the ſoul as it were, and modify its preception of the object.

From theſe principles we muſt neceſſarily conclude, either that the idea is ſome modification of the human mind, or that it muſt be an idea in the Divine Mind, which is always intimately preſent with our minds. The matter being brought to this alternative, MALEBRANCHE conſiders

ſiders firſt all the poſſible ways ſuch a modification may be produced in our mind as that we call an idea of a material object, taking it for granted always, that it muſt be an object perceived, and ſomething different from the act of the mind in perceiving it. He finds inſuperable objections againſt every hypotheſis of ſuch ideas being produced in our minds, and therefore concludes, that the immediate objects of perception are the ideas of the Divine Mind.

Againſt this ſyſtem ARNAULD wrote his book of True and Falſe Ideas. He does not object to the alternative mentioned by MALEBRANCHE; but he maintains, that ideas are modifications of our minds. And finding no other modification of the human mind which can be called the idea of an external object, he ſays it is only another word for perception. Chap. 5. def. 3. "I take "the idea of an object, and the perception of an "object, to be the ſame thing. I do not ſay "whether there may be other things to which "the name of idea may be given. But it is cer-"tain that there are ideas taken in this ſenſe, and "that theſe ideas are either attributes or modifi-"cations of our minds."

This, I think indeed, was to attack the ſyſtem of MALEBRANCHE upon its weak ſide, and where, at the ſame time, an attack was leaſt expected. Philoſophers had been ſo unanimous in maintaining that we do not perceive external objects immediately,

immediately, but by certain repreſentative images of them called *ideas*, that MALEBRANCHE might well think his ſyſtem ſecure upon that quarter, and that the only queſtion to be determined was, In what ſubject thoſe ideas are placed, whether in the human or in the Divine Mind?

But, ſays Mr ARNAULD, thoſe ideas are mere chimeras, fictions of Philoſophers; there are no ſuch beings in nature; and therefore it is to no purpoſe to inquire whether they are in the Divine or in the human mind. The only true and real ideas are our perceptions, which are acknowledged by all Philoſophers, and MALEBRANCHE himſelf, to be acts or modifications of our own minds. He does not ſay that the fictitious ideas were a fiction of MALEBRANCHE. He acknowledges, that they had been very generally maintained by the ſcholaſtic Philoſophers, and points out, very judiciouſly, the prejudices that had led them into the belief of ſuch ideas.

Of all the powers of our mind, the external ſenſes are thought to be the beſt underſtood, and their objects are the moſt familiar. Hence we meaſure other powers by them, and transfer to other powers the language which properly belongs to them. The objects of ſenſe muſt be preſent to the ſenſe, or within its ſphere, in order to their being perceived. Hence, by analogy, we are led to ſay of every thing when we

think of it, that it is preſent to the mind, or in the mind. But this preſence is metaphorical, or analogical only; and ARNAULD calls it objective preſence, to diſtinguiſh it from that local preſence which is required in objects that are perceived by ſenſe. But both being called by the ſame name, they are confounded together, and thoſe things that belong only to real or local preſence, are attributed to the metaphorical.

We are likewiſe accuſtomed to ſee objects by their images in a mirror, or in water; and hence are led, by analogy, to think that objects may be preſented to the memory or imagination, in ſome ſimilar manner, by images, which Philoſophers have called *ideas*.

By ſuch prejudices and analogies, ARNAULD conceives, men have been led to believe, that the objects of memory and imagination muſt be preſented to the mind by images or ideas; and the Philoſophers have been more carried away by theſe prejudices than even the vulgar, becauſe the uſe made of this theory was to explain and account for the various operations of the mind, a matter in whcih the vulgar take no concern.

He thinks, however, that DES CARTES had got the better of theſe prejudices, and that he uſes the word idea as ſignifying the ſame thing with perception, and is therefore ſurpriſed that a diſciple of DES CARTES, and one who was ſo great an admirer of him as MALEBRANCHE was, ſhould be

be carried away by them. It is ſtrange, indeed, that the two moſt eminent diſciples of DES CARTES, and his cotemporaries, ſhould differ ſo eſſentially with regard to his doctrine concerning ideas.

I ſhall not attempt to give the reader an account of the continuation of this controverſy between thoſe two acute Philoſophers, in the ſubſequent defences and replies; becauſe I have not acceſs to ſee them. After much reaſoning, and ſome animoſity, each continued in his own opinion, and left his antagoniſt where he found him. MALEBRANCHE's opinion of our ſeeing all things in God, ſoon died away of itſelf; and ARNAULD's notion of ideas ſeems to have been leſs regarded than it deſerved, by the Philoſophers that came after him; perhaps for this reaſon, among others, that it ſeemed to be in ſome ſort given up by himſelf, in his attempting to reconcile it to the common doctrine concerning ideas.

From the account I have given, one would be apt to conclude, that ARNAULD totally denied the exiſtence of ideas, in the philoſophical ſenſe of that word, and that he adopted the notion of the vulgar, who acknowledge no object of perception but the external object. But he ſeems very unwilling to deviate ſo far from the common track, and what he had given up with one hand he takes back with the other.

For, *firſt*, Having defined ideas to be the ſame thing with perceptions, he adds this qualification to his definition: "I do not here conſider whe-"ther there are other things that may be call-"ed ideas; but it is certain there are ideas ta-"ken in this ſenſe." I believe, indeed, there is no Philoſopher who does not, on ſome occaſions, uſe the word idea in this popular ſenſe.

Secondly, He ſupports this popular ſenſe of the word by the authority of DES CARTES, who, in his demonſtration of the exiſtence of God from the idea of him in our minds, defines an idea thus: "By the word *idea*, I underſtand "that form of any thought, by the immediate "perception of which I am conſcious of that "thought; ſo that I can expreſs nothing by "words, with underſtanding, without being cer-"tain that there is in my mind the idea of that "which is expreſſed by the words." This definition ſeems, indeed, to be of the ſame import with that which is given by ARNAULD. But DES CARTES adds a qualification to it, which ARNAULD, in quoting it, omits; and which ſhews, that DES CARTES meant to limit his definition to the idea then treated of, that is, to the idea of the Deity; and that there are other ideas to which this definition does not apply. For he adds: "And thus I give the name of "idea, not ſolely to the images painted in the "phantaſy. Nay, in this place, I do not at all

"give

" give the name of ideas to thoſe images, in ſo " far as they are painted in the corporeal phan- " taſy that is in ſome part of the brain, but only " in ſo far as they inform the mind, turning its " attention to that part of the brain."

Thirdly, ARNAULD has employed the whole of his ſixth chapter, to ſhew that theſe ways of ſpeaking, common among Philoſophers, to wit, *that we perceive not things immediately; that it is their ideas that are the immediate objects of our thoughts; that it is in the idea of every thing that we perceive its properties*, are not to be rejected, but are true when rightly underſtood. He labours to reconcile theſe expreſſions to his own definition of ideas, by obſerving, that every perception and every thought is neceſſarily conſcious of itſelf, and reflects upon itſelf; and that, by this conſciouſneſs and reflection, it is its own immediate object. Whence he infers, that the idea, that is, the perception, is the immediate object of perception.

This looks like a weak attempt to reconcile two inconſiſtent doctrines, by one who wiſhes to hold both. It is true, that conſciouſneſs always goes along with perception; but they are different operations of the mind, and they have their different objects. Conſciouſneſs is not perception, nor is the object of conſciouſneſs the object of perception. The ſame may be ſaid of every operation of mind that has an object.

Thus, injury is the object of reſentment. When I reſent an injury, I am conſcious of my reſentment; that is, my reſentment is the immediate and the only object of my conſciouſneſs; but it would be abſurd to infer from this, that my reſentment is the immediate object of my reſentment.

Upon the whole, if ARNAULD, in conſequence of his doctrine, that ideas, taken for repreſentative images of external objects, are a mere fiction of the Philoſophers, had rejected boldly the doctrine of DES CARTES, as well as of the other Philoſophers, concerning thoſe fictitious beings, and all the ways of ſpeaking that imply their exiſtence, I ſhould have thought him more conſiſtent with himſelf, and his doctrine concerning ideas, more rational and more intelligible than that of any other author of my acquaintance who has treated of the ſubject.

CHAP. XIV.

Reflections on the common Theory of Ideas.

AFTER ſo long a detail of the ſentiments of Philoſophers, ancient and modern, concerning ideas, it may ſeem preſumptuous to call in queſtion their exiſtence. But no philoſophical

cal opinion, however ancient, however generally received, ought to reſt upon authority. There is no preſumption in requiring evidence for it, or in regulating our belief by the evidence we can find.

To prevent miſtakes, the reader muſt again be reminded, that if by ideas are meant only the acts or operations of our minds in perceiving, remembering, or imagining objects, I am far from calling in queſtion the exiſtence of thoſe acts; we are conſcious of them every day, and every hour of life; and I believe no man of a ſound mind ever doubted of the real exiſtence of the operations of mind, of which he is conſcious. Nor is it to be doubted, that, by the faculties which God has given us, we can conceive things that are abſent, as well as perceive thoſe that are within the reach of our ſenſes; and that ſuch conceptions may be more or leſs diſtinct, and more or leſs lively and ſtrong. We have reaſon to aſcribe to the all-knowing and all-perfect Being diſtinct conceptions of all things exiſtent and poſſible, and of all their relations; and if theſe conceptions are called his eternal ideas, there ought to be no diſpute among Philoſophers about a word. The ideas, of whoſe exiſtence I require the proof, are not the operations of any mind, but ſuppoſed objects of thoſe operations. They are not perception, remembrance, or conception, but things that are

ſaid to be perceived, or remembered, or imagined.

Nor do I diſpute the exiſtence of what the vulgar call the objects of perception. Theſe, by all who acknowledge their exiſtence, are called real things, not ideas. But Philoſophers maintain, that, beſides theſe, there are immediate objects of perception in the mind itſelf: That, for inſtance, we do not ſee the ſun immediately, but an idea; or, as Mr HUME calls it, an impreſſion, in our own minds. This idea is ſaid to be the image, the reſemblance, the repreſentative of the ſun, if there be a ſun. It is from the exiſtence of the idea that we muſt infer the exiſtence of the ſun. But the idea being immediately perceived, there can be no doubt, as Philoſophers think, of its exiſtence.

In like manner, when I remember, or when I imagine any thing, all men acknowledge that there muſt be ſomething that is remembered, or that is imagined; that is, ſome object of thoſe operations. The object remembered muſt be ſomething that did exiſt in time paſt. The object imagined may be ſomething that never exiſted. But, ſay the Philoſophers, beſides theſe objects which all men acknowledge, there is a more immediate object which really exiſts in the mind at the ſame time we remember or imagine. This object is an idea or image of the thing remembered or imagined.

The

The *firſt* reflection I would make on this philoſophical opinion is, That it is directly contrary to the univerſal ſenſe of men who have not been inſtructed in philoſophy. When we ſee the ſun or moon, we have no doubt that the very objects which we immediately ſee, are very far diſtant from us, and from one another. We have not the leaſt doubt, that this is the ſun and moon which God created ſome thouſands of years ago, and which have continued to perform their revolutions in the heavens ever ſince. But how are we aſtoniſhed when the Philoſopher informs us, that we are miſtaken in all this; that the ſun and moon which we ſee, are not, as we imagine, many miles diſtant from us, and from each other, but that they are in our own mind; that they had no exiſtence before we ſaw them, and will have none when we ceaſe to perceive and to think of them; becauſe the objects we perceive are only ideas in our own minds, which can have no exiſtence a moment longer than we think of them.

If a plain man, uninſtructed in philoſophy, has faith to receive theſe myſteries, how great muſt be his aſtoniſhment. He is brought into a new world, where every thing he ſees, taſtes, or touches, is an idea; a fleeting kind of being which he can conjure into exiſtence, or can annihilate in the twinkling of an eye.

After

After his mind is ſomewhat compoſed, it will be natural for him to aſk his philoſophical inſtructor, Pray, Sir, are there then no ſubſtantial and permanent beings called the ſun and moon, which continue to exiſt whether we think of them or not?

Here the Philoſophers differ. Mr LOCKE, and thoſe that were before him, will anſwer to this queſtion, That it is very true, there are ſubſtantial and permanent beings called the ſun and moon; but they never appear to us in their own perſon, but by their repreſentatives, the ideas in our own minds, and we know nothing of them but what we can gather from thoſe ideas.

Biſhop BERKELEY and Mr HUME would give a different anſwer to the queſtion propoſed: They would aſſure the queriſt, that it is a vulgar error, a mere prejudice of the ignorant and unlearned, to think that there are any permanent and ſubſtantial beings called the ſun and moon; that the heavenly bodies, our own bodies, and all bodies whatſoever, are nothing but ideas in our minds; and that there can be nothing like the ideas of one mind, but the ideas of another mind. There is nothing in nature but minds and ideas, ſays the Biſhop, nay, ſays Mr HUME, there is nothing in nature but ideas only; for what we call a mind is nothing but a train

train of ideas connected by certain relations between themſelves.

In this repreſentation of the theory of ideas, there is nothing exaggerated or miſrepreſented, as far as I am able to judge; and ſurely nothing further is neceſſary to ſhew, that, to the uninſtructed in philoſophy, it muſt appear extravagant and viſionary, and moſt contrary to the dictates of common underſtanding.

There is the leſs need of any further proof of this, that it is very amply acknowledged by Mr HUME in his Eſſay on the Academical or Sceptical Philoſophy. "It ſeems evident, ſays he, "that men are carried by a natural inſtinct, or "prepoſſeſſion, to repoſe faith in their ſenſes; "and that without any reaſoning, or even almoſt "before the uſe of reaſon, we always ſuppoſe an "external univerſe, which depends not on our "perception, but would exiſt though we and "every ſenſible creature were abſent or annihi-"lated. Even the animal creation are govern-"ed by a like opinion, and preſerve this belief "of external objects in all their thoughts, de-"ſigns, and actions.

"It ſeems alſo evident, that when men follow "this blind and powerful inſtinct of nature, "they always ſuppoſe the very images preſented "by the ſenſes to be the external objects, and "never entertain any ſuſpicion, that the one are "nothing but repreſentations of the other. This very

" very table which we ſee white, and feel hard,
" is believed to exiſt independent of our per-
" ception, and to be ſomething external to
" the mind which perceives it; our preſence
" beſtows not being upon it; our abſence anni-
" hilates it not: It preſerves its exiſtence uni-
" form and entire, independent of the ſituation
" of intelligent beings who perceive or contem-
" plate it.

" But this univerſal and primary notion of all
" men is ſoon deſtroyed by the ſlighteſt philoſo-
" phy, which teaches us, that nothing can ever
" be preſent to the mind, but in image or per-
" ception; and that the ſenſes are only the in-
" lets through which theſe images are received,
" without being ever able to produce any imme-
" diate intercourſe between the mind and the
" object."

It is therefore acknowledged by this Philoſopher, to be a natural inſtinct or prepoſeſſion, an univerſal and primary opinion of all men, a primary inſtinct of nature, that the objects which we immediately perceive by our ſenſes, are not images in our minds, but external objects, and that their exiſtence is independent of us, and our perception.

In this acknowledgment, Mr HUME, indeed, ſeems to me more generous, and even more ingenuous than Biſhop BERKELEY, who would perſuade us, that his opinion does not oppoſe the vulgar

vulgar opinion, but only that of the Philoſophers; and that the external exiſtence of a material world is a philoſophical hypotheſis, and not the natural dictate of our perceptive powers. The Biſhop ſhows a timidity of engaging ſuch an adverſary, as a primary and univerſal opinion of all men. He is rather fond to court its patronage. But the Philoſopher intrepidly gives a defiance to this antagoniſt, and ſeems to glory in a conflict that was worthy of his arm. *Optat aprum aut fulvum deſcendere monte leonem.* After all, I ſuſpect that a Philoſopher, who wages war with this adverſary, will find himſelf in the ſame condition as a Mathematician who ſhould undertake to demonſtrate, that there is no truth in the axioms of mathematics.

A *ſecond* reflection upon this ſubject is, That the authors who have treated of ideas, have generally taken their exiſtence for granted, as a thing that could not be called in queſtion; and ſuch arguments as they have mentioned incidentally, in order to prove it, ſeem too weak to ſupport the concluſion.

Mr Locke, in the introduction to his Eſſay, tells us, that he uſes the word idea to ſignify whatever is the immediate object of thought; and then adds, "I preſume it will be eaſily "granted me that there are ſuch ideas in mens "minds; every one is conſcious of them in him-"ſelf, and mens words and actions will ſatisfy "him

" him that they are in others." I am indeed conſcious of perceiving, remembering, imagining; but that the objects of theſe operations are images in my mind, I am not conſcious. I am ſatisfied by mens words and actions, that they often perceive the ſame objects which I perceive, which could not be, if thoſe objects were ideas in their own minds.

Mr NORRIS is the only author I have met with, who profeſſedly puts the queſtion, Whether material things can be perceived by us immediately? He has offered four arguments to ſhow that they cannot. *Firſt*, " Material ob-" jects are without the mind, and therefore there " can be no union between the object and the " percipient." *Anſwer*, This argument is lame, until it is ſhown to be neceſſary that in perception there ſhould be a union between the object and the percipient. *Second*, " Material objects " are diſproportioned to the mind, and removed " from it by the whole diameter of Being." This argument I cannot anſwer, becauſe I do not underſtand it. *Third*, " Becauſe, if material ob-" jects were immediate objects of perception, " there could be no phyſical ſcience; things " neceſſary and immutable being the only ob-" ject of ſcience." *Anſwer*, Although things neceſſary and immutable be not the immediate objects of perception, they may be immediate objects of other powers of the mind.

Fourth,

Fourth, " If material things were perceived by " themſelves, they would be a true light to " our minds, as being the intelligible form of " our underſtandings, and conſequently perfec- " tive of them, and indeed ſuperior to them." If I comprehend any thing of this myſterious argument, it follows from it, that the Deity perceives nothing at all, becauſe nothing can be ſuperior to his underſtanding, or perfective of it.

There is an argument which is hinted at by MALEBRANCHE, and by ſeveral other authors, which deſerves to be more ſeriouſly conſidered. As I find it moſt clearly expreſſed, and moſt fully urged by Dr SAMUEL CLARKE, I ſhall give it in his words, in his ſecond reply to LEIBNITZ, ſect. 4. " The ſoul, without being preſent to " the images of the things perceived, could not " poſſibly perceive them. A living ſubſtance " can only there perceive, where it is preſent, " either to the things themſelves, (as the omni- " preſent God is to the whole univerſe), or to " the images of things, as the ſoul is in its pro- " per *ſenſorium*."

Sir ISAAC NEWTON expreſſes the ſame ſentiment, but with his uſual reſerve, in a query only.

The ingenious Dr PORTERFIELD, in his Eſſay concerning the motions of our eyes, adopts this opinion with more confidence. His words are: " How body acts upon mind, or mind upon bo- " dy,

"dy, I know not; but this I am very certain "of, that nothing can act, or be acted upon, "where it is not; and therefore, our mind can "never perceive any thing but its own proper "modifications, and the various ſtates of the "ſenſorium, to which it is preſent: So that it "is not the external ſun and moon which are in "the heavens, which our mind perceives, but "only their image or repreſentation impreſſed "upon the ſenſorium. How the ſoul of a ſee-"ing man ſees theſe images, or how it receives "thoſe ideas, from ſuch agitations in the ſenſo-"rium, I know not; but I am ſure it can never "perceive the external bodies themſelves, to "which it is not preſent."

Theſe, indeed, are great authorities; but, in matters of philoſophy, we muſt not be guided by authority, but by reaſon. Dr CLARKE, in the place cited, mentions ſlightly, as the reaſon of his opinion, that "nothing can any more act, "or be acted upon, when it is not preſent, than "it can be where it is not.', And again, in his third reply to LEIBNITZ, ſect. 11. "We are "ſure the ſoul cannot perceive what it is not "preſent to, becauſe nothing can act, or be act-"ed upon, where it is not." The ſame reaſon we ſee is urged by Dr PORTERFIELD.

That nothing can act immediately where it is not, I think, muſt be admitted; for I agree with Sir ISAAC NEWTON, that power without ſubſtance

ſubſtance is inconceivable. It is a conſequence of this, that nothing can be acted upon immediately where the agent is not preſent: Let this therefore be granted. To make the reaſoning concluſive, it is further neceſſary, that, when we perceive objects, either they act upon us, or we act upon them. This does not appear ſelf-evident, nor have I ever met with any proof of it. I ſhall briefly offer the reaſons why I think it ought not to be admitted.

When we ſay that one being acts upon another, we mean that ſome power or force is exerted by the agent, which produces, or has a tendency to produce, a change in the thing acted upon. If this be the meaning of the phraſe, as I conceive it is, there appears no reaſon for aſſerting, that, in perception, either the object acts upon the mind, or the mind upon the object.

An object, in being perceived, does not act at all. I perceive the walls of the room where I ſit; but they are perfectly inactive, and therefore act not upon the mind. To be perceived, is what Logicians call an external denomination, which implies neither action nor quality in the object perceived. Nor could men ever have gone into this notion, that perception is owing to ſome action of the object upon the mind, were it not, that we are ſo prone to form our notions of the mind from ſome ſimilitude we conceive between it and body. Thought in the mind is conceived

to have ſome analogy to motion in a body: And as a body is put in motion, by being acted upon by ſome other body; ſo we are apt to think the mind is made to perceive, by ſome impulſe it receives from the object. But reaſonings, drawn from ſuch analogies, ought never to be truſted. They are, indeed, the cauſe of moſt of our errors with regard to the mind. And we might as well conclude, that minds may be meaſured by feet and inches, or weighed by ounces aud drachms, becauſe bodies have thoſe properties.

I ſee as little reaſon, in the ſecond place, to believe, that in perception the mind acts upon the object. To perceive an object is one thing; to act upon it is another: Nor is the laſt at all included in the firſt. To ſay, that I act upon the wall, by looking at it, is an abuſe of language, and has no meaning. Logicians diſtinguiſh two kinds of operations of mind; the firſt kind produces no effect without the mind; the laſt does. The firſt they call *immanent acts*; the ſecond *tranſitive*. All intellectual operations belong to the firſt claſs; they produce no effect upon any external object. But without having recourſe to logical diſtinctions, every man of common ſenſe knows, that to think of an object, and to act upon it, are very different things.

As we have therefore no evidence, that, in perception, the mind acts upon the object, or the object upon the mind, but ſtrong reaſons to the contrary;

contrary; Dr CLARKE's argument againſt our perceiving external objects immediately falls to the ground.

This notion, that, in perception, the object muſt be contiguous to the percipient, ſeems, with many other prejudices, to be borrowed from analogy. In all the external ſenſes, there muſt, as has been before obſerved, be ſome impreſſion made upon the organ of ſenſe by the object, or by ſomething coming from the object. An impreſſion ſuppoſes contiguity. Hence we are led by analogy to conceive ſomething ſimilar in the operations of the mind. Many Philoſophers reſolve almoſt every operation of mind into impreſſions and feelings, words manifeſtly borrowed from the ſenſe of touch. And it is very natural to conceive contiguity neceſſary between that which makes the impreſſion, and that which receives it; between that which feels, and that which is felt. And though no Philoſopher will now pretend to juſtify ſuch analogical reaſoning as this; yet it has a powerful influence upon the judgment, while we contemplate the operations of our minds, only as they appear through the deceitful medium of ſuch analogical notions and expreſſions.

When we lay aſide thoſe analogies, and reflect attentively upon our perception of the objects of ſenſe, we muſt acknowledge, that, though we are conſcious of perceiving objects, we are

altogether ignorant how it is brought about; and know as little how we perceive objects as how we were made. And if we ſhould admit an image in the mind, or contiguous to it, we know as little how perception may be produced by this image as by the moſt diſtant object. Why therefore ſhould we be led, by a theory which is neither grounded on evidence, nor, if admitted, can explain any one phænomenon of perception, to reject the natural and immediate dictates of thoſe perceptive powers, to which, in the conduct of life, we find a neceſſity of yielding implicit ſubmiſſion?

There remains only one other argument that I have been able to find urged againſt our perceiving external objects immediately. It is propoſed by Mr HUME, who, in the Eſſay already quoted, after acknowledging that it is an univerſal and primary opinion of all men, that we perceive external objects immediately, ſubjoins what follows:

"But this univerſal and primary opinion of "all men is ſoon deſtroyed by the ſlighteſt phi- "loſophy, which teaches us, that nothing can "ever be preſent to the mind but an image or "perception; and that the ſenſes are only the "inlets through which theſe images are received, "without being ever able to produce any im- "mediate intercourſe between the mind and the "object. The table, which we ſee, ſeems to

"diminiſh

" diminiſh as we remove farther from it: But " the real table, which exiſts independent of us, " ſuffers no alteration. It was therefore nothing " but its image which was preſent to the mind. " Theſe are the obvious dictates of reaſon; and " no man who reflects, ever doubted that the " exiſtences which we conſider, when we ſay " *this houſe*, and *that tree*, are nothing but per- " ceptions in the mind, and fleeting copies and " repreſentations of other exiſtences, which re- " main uniform and independent. So far then, " we are neceſſitated, by reaſoning, to depart " from the primary inſtincts of nature, and to " embrace a new ſyſtem with regard to the evi- " dence of our ſenſes."

We have here a remarkable conflict between two contradictory opinions, wherein all mankind are engaged. On the one ſide, ſtand all the vulgar, who are unpractiſed in philoſophical reſearches, and guided by the uncorrupted primary inſtincts of nature. On the other ſide, ſtand all the Philoſophers ancient and modern; every man without exception who reflects. In this diviſion, to my great humiliation, I find myſelf claſſed with the vulgar.

The paſſage now quoted is all I have found in Mr HUME's writings upon this point; and indeed there is more reaſoning in it than I have found in any other author; I ſhall therefore examine it minutely.

Firſt, He tells us, That "this univerſal and "primary opinion of all men is ſoon deſtroyed "by the ſlighteſt philoſophy, which teaches us, "that nothing can ever be preſent to the mind "but an image or perception."

The phraſe of being preſent to the mind has ſome obſcurity; but I conceive he means being an immediate object of thought; an immediate object, for inſtance, of perception, of memory, or of imagination. If this be the meaning, (and it is the only pertinent one I can think of), there is no more in this paſſage but an aſſertion of the propoſition to be proved, and an aſſertion that philoſophy teaches it. If this be ſo, I beg leave to diſſent from philoſophy till ſhe gives me reaſon for what ſhe teaches. For though common ſenſe and my external ſenſes demand my aſſent to their dictates upon their own authority, yet philoſophy is not entitled to this privilege. But that I may not diſſent from ſo grave a perſonage without giving a reaſon, I give this as the reaſon of my diſſent. I ſee the ſun when he ſhines; I remember the battle of Culloden; and neither of theſe objects is an image or perception.

He tells us in the *next* place, "That the "ſenſes are only the inlets through which theſe "images are received."

I know that ARISTOTLE and the ſchoolmen taught, that images or ſpecies flow from objects, and

and are let in by the ſenſes, and ſtrike upon the mind; but this has been ſo effectually refuted by DES CARTES, by MALEBRANCHE, and many others, that nobody now pretends to defend it. Reaſonable men conſider it as one of the moſt unintelligible and unmeaning parts of the ancient ſyſtem. To what cauſe is it owing that modern Philoſophers are ſo prone to fall back into this hypotheſis, as if they really believed it? For of this proneneſs I could give many inſtances beſides this of Mr HUME; and I take the cauſe to be, that images in the mind, and images let in by the ſenſes, are ſo nearly allied, and ſo ſtrictly connected, that they muſt ſtand or fall together. The old ſyſtem conſiſtently maintained both: But the new ſyſtem has rejected the doctrine of images let in by the ſenſes, holding, nevertheleſs, that there are images in the mind; and, having made this unnatural divorce of two doctrines which ought not to be put aſunder, that which they have retained often leads them back involuntarily to that which they have rejected.

Mr HUME ſurely did not ſeriouſly believe that an image of ſound is let in by the ear, an image of ſmell by the noſe, an image of hardneſs and ſoftneſs, of ſolidity and reſiſtance, by the touch. For, beſides the abſurdity of the thing, which has often been ſhown, Mr HUME, and all modern Philoſophers maintain, that the images

which are the immediate objects of perception have no exiſtence when they are not perceived; whereas, if they were let in by the ſenſes, they muſt be, before they are perceived, and have a ſeparate exiſtence.

He tells us further, that philoſophy teaches, that the ſenſes are unable to produce any immediate intercourſe between the mind and the object. Here, I ſtill require the reaſons that philoſophy gives for this; for, to my apprehenſion, I immediately perceive external objects, and this I conceive is the immediate intercourſe here meant.

Hitherto I ſee nothing that can be called an argument. Perhaps it was intended only for illuſtration. The argument, the only argument follows:

The table which we ſee, ſeems to diminiſh as we remove farther from it; but the real table, which exiſts independent of us, ſuffers no alteration: It was therefore nothing but its image which was preſented to the mind. Theſe are the obvious dictates of reaſon.

To judge of the ſtrength of this argument, it is neceſſary to attend to a diſtinction which is familiar to thoſe who are converſant in the mathematical ſciences, I mean the diſtinction between real and apparent magnitude. The real magnitude of a line is meaſured by ſome known meaſure of length, as inches, feet, or miles: The

real

real magnitude of a ſurface or ſolid, by known meaſures of ſurface or of capacity. This magnitude is an object of touch only, and not of ſight; nor could we even have had any conception of it, without the ſenſe of touch; and Biſhop BERKELEY, on that account, calls it *tangible magnitude.*

Apparent magnitude is meaſured by the angle which an object ſubtends at the eye. Suppoſing two right lines drawn from the eye to the extremities of the object, making an angle of which the object is the ſubtenſe, the apparent magnitude is meaſured by this angle. This apparent magnitude is an object of ſight, and not of touch. Biſhop BERKELEY calls it *viſible magnitude.*

If it is aſked, What is the apparent magnitude of the ſun's diameter? the anſwer is, That it is about thirty-one minutes of a degree. But if it is aſked, What is the real magnitude of the ſun's diameter? the anſwer muſt be, So many thouſand miles, or ſo many diameters of the earth. From which it is evident, that real magnitude, and apparent magnitude, are things of a different nature, though the name of magnitude is given to both. The firſt has three dimenſions, the laſt only two. The firſt is meaſured by a line, the laſt by an angle.

From what has been ſaid, it is evident that the real magnitude of a body muſt continue unchanged,

changed, while the body is unchanged. This we grant. But it is likewiſe evident, that the apparent magnitude muſt continue the ſame while the body is unchanged. So far otherwiſe, that every man who knows any thing of mathematics can eaſily demonſtrate, that the ſame individual object, remaining in the ſame place, and unchanged, muſt neceſſarily vary in its apparent magnitude, according as the point from which it is ſeen is more or leſs diſtant; and that its apparent length or breadth will be nearly in a reciprocal proportion to the diſtance of the ſpectator. This is as certain as the principles of geometry.

We muſt likewiſe attend to this, that though the real magnitude of a body is not originally an object of ſight, but of touch, yet we learn by experience to judge of the real magnitude in many caſes by ſight. We learn by experience to judge of the diſtance of a body from the eye within certain limits; and from its diſtance and apparent magnitude taken together, we learn to judge of its real magnitude.

And this kind of judgment, by being repeated every hour, and almoſt every minute of our lives, becomes, when we are grown up, ſo ready and ſo habitual, that it very much reſembles the original perceptions of our ſenſes, and may not improperly be called *acquired perception.*

Whether

Whether we call it judgment or acquired perception is a verbal difference. But it is evident, that, by means of it, we often diſcover by one ſenſe things which are properly and naturally the objects of another. Thus I can ſay without impropriety, I hear a drum, I hear a great bell, or I hear a ſmall bell; though it is certain that the figure or ſize of the ſounding body is not originally an object of hearing. In like manner, we learn by experience how a body of ſuch a real magnitude, and at ſuch a diſtance, appears to the eye: But neither its real magnitude, nor its diſtance from the eye, are properly objects of ſight, any more than the form of a drum, or the ſize of a bell, are properly objects of hearing.

If theſe things be conſidered, it will appear, that Mr HUME's argument hath no force to ſupport his concluſion, nay, that it leads to a contrary concluſion. The argument is this, the table we ſee ſeems to diminiſh as we remove farther from it; that is, its apparent magnitude is diminiſhed; but the real table ſuffers no alteration, to wit, in its real magnitude; therefore it is not the real table we ſee: I admit both the premiſes in this ſyllogiſm, but I deny the concluſion. The ſyllogiſm has what the Logicians call two middle terms: Apparent magnitude is the middle term in the firſt premiſe; real magnitude in the ſecond. Therefore, according to the rules of logic, the concluſion is not juſtly drawn

drawn from the premiſes; but, laying aſide the rules of logic, let us examine it by the light of common ſenſe.

Let us ſuppoſe, for a moment, that it is the real table we ſee: Muſt not this real table ſeem to diminiſh as we remove farther from it? It is demonſtrable that it muſt. How then can this apparent diminution be an argument that it is not the real table? When that which muſt happen to the real table, as we remove farther from it, does actually happen to the table we ſee, it is abſurd to conclude from this, that it is not the real table we ſee. It is evident therefore, that this ingenious author has impoſed upon himſelf by confounding real magnitude with apparent magnitude, and that his argument is a mere ſophiſm.

I obſerved that Mr HUME's argument not only has no ſtrength to ſupport his concluſion, but that it leads to the contrary concluſion; to wit, that it is the real table we ſee; for this plain reaſon, that the table we ſee has preciſely that apparent magnitude which it is demonſtrable the real table muſt have when placed at that diſtance.

This argument is made much ſtronger by conſidering, that the real table may be placed ſucceſſively at a thouſand different diſtances; and in every diſtance, in a thouſand different poſitions; and it can be determined demonſtratively, by

by the rules of geometry and perſpective, what muſt be its apparent magnitude, and apparent figure, in each of thoſe diſtances and poſitions. Let the table be placed ſucceſſively in as many of theſe different diſtances, and different poſitions, as you will, or in them all; open your eyes and you ſhall ſee a table preciſely of that apparent magnitude, and that apparent figure, which the real table muſt have in that diſtance, and in that poſition. Is not this a ſtrong argument that it is the real table you ſee?

In a word, the appearance of a viſible object is infinitely diverſified, according to its diſtance and poſition. The viſible appearances are innumerable, when we confine ourſelves to one object, and they are multiplied according to the variety of objects. Thoſe appearances have been matter of ſpeculation to ingenious men, at leaſt ſince the time of EUCLID. They have accounted for all this variety, on the ſuppoſition, that the objects we ſee are external, and not in the mind itſelf. The rules they have demonſtrated about the various projections of the ſphere, about the appearances of the planets in their progreſſions, ſtations, and retrogradations, and all the rules of perſpective, are built on the ſuppoſition that the objects of ſight are external. They can each of them be tried in thouſands of inſtances. In many arts and profeſſions innumerable trials are daily made; nor were they ever

ever found to fail in a ſingle inſtance. Shall we ſay that a falſe ſuppoſition, invented by the rude vulgar, has been ſo lucky in ſolving an infinite number of phænomena of nature? This ſurely would be a greater prodigy than philoſophy ever exhibited: Add to this, that upon the contrary hypotheſis, to wit, that the objects of ſight are internal, no account can be given of any one of thoſe appearances, nor any phyſical cauſe aſſigned why a viſible object ſhould, in any one caſe, have one apparent figure and magnitude rather than another.

Thus I have conſidered every argument I have found advanced to prove the exiſtence of ideas, or images of external things, in the mind: And if no better arguments can be found, I cannot help thinking, that the whole hiſtory of philoſophy has never furniſhed an inſtance of an opinion ſo unanimouſly entertained by Philoſophers upon ſo ſlight grounds.

A *third* reflection I would make upon this ſubject is, That Philoſophers, notwithſtanding their unanimity as to the exiſtence of ideas, hardly agree in any one thing elſe concerning them. If ideas be not a mere fiction, they muſt be, of all objects of human knowledge, the things we have beſt acceſs to know, and to be acquainted with; yet there is nothing about which men differ ſo much.

Some

Some have held them to be ſelf-exiſtent, others to be in the Divine Mind, others in our own minds, and others in the brain or *ſenſorium*: I conſidered the hypotheſis of images in the brain, in the fourth chapter of this Eſſay. As to images in the mind, if any thing more is meant by the image of an object in the mind than the thought of that object, I know not what it means. The diſtinct conception of an object may, in a metaphorical or analogical ſenſe, be called an *image* of it in the mind. But this image is only the conception of the object, and not the object conceived. It is an act of the mind, and not the object of that act.

Some Philoſophers will have our ideas, or a part of them, to be innate; others will have them all to be adventitious: Some derive them from the ſenſes alone; others from ſenſation and reflection: Some think they are fabricated by the mind itſelf; others that they are produced by external objects; others that they are the immediate operation of the Deity; others ſay, that impreſſions are the cauſes of ideas, and that the cauſes of impreſſions are unknown: Some think that we have ideas only of material objects, but none of minds, of their operations, or of the relations of things; others will have the immediate object of every thought to be an idea: Some think we have abſtract ideas, and that by this chiefly we are diſtinguiſhed from the brutes; others

others maintain an abſtract idea to be an abſurdity, and that there can be no ſuch thing: With ſome they are the immediate objects of thought, with others the only objects.

A *fourth* reflection is, That ideas do not make any of the operations of the mind to be better underſtood, although it was probably with that view that they have been firſt invented, and afterwards ſo generally received.

We are at a loſs to know how we perceive diſtant objects; how we remember things paſt; how we imagine things that have no exiſtence. Ideas in the mind ſeem to account for all theſe operations: They are all by the means of ideas reduced to one operation; to a kind of feeling, or immediate perception of things preſent, and in contact with the percipient; and feeling is an operation ſo familiar, that we think it needs no explication, but may ſerve to explain other operations.

But this feeling, or immediate perception, is as difficult to be comprehended, as the things which we pretend to explain by it. Two things may be in contact without any feeling or perception; there muſt therefore be in the percipient a power to feel or to perceive. How this power is produced, and how it operates, is quite beyond the reach of our knowledge. As little can we know whether this power muſt be limited to things preſent, and in contact with us.

Nor

Nor can any man pretend to prove, that the Being, who gave us the power to perceive things preſent, may not give us the power to perceive things that are diſtant, to remember things paſt, and to conceive things that never exiſted.

Some Philoſophers have endeavoured to make all our ſenſes to be only different modifications of touch; a theory which ſerves only to confound things that are different, and to perplex and darken things that are clear. The theory of ideas reſembles this, by reducing all the operations of the human underſtanding to the perception of ideas in our own minds. This power of perceiving ideas is as inexplicable as any of the powers explained by it: And the contiguity of the object contributes nothing at all to make it better underſtood; becauſe there appears no connection between contiguity and perception, but what is grounded on prejudices, drawn from ſome imagined ſimilitude between mind and body; and from the ſuppoſition, that, in perception, the object acts upon the mind, or the mind upon the object. We have ſeen how this theory has led Philoſophers to confound thoſe operations of mind which experience teaches all men to be different, and teaches them to diſtinguiſh in common language; and that it has led them to invent a language inconſiſtent with the principles upon which all language is grounded.

The *laſt* reflection I ſhall make upon this theory, is, That the natural and neceſſary conſequences of it furniſh a juſt prejudice againſt it to every man who pays a due regard to the common ſenſe of mankind.

Not to mention, that it led the Pythagoreans and PLATO to imagine that we ſee only the ſhadows of external things, and not the things themſelves, and that it gave riſe to the Peripatetic doctrine of ſenſible *ſpecies*, one of the greateſt abſurdities of that ancient ſyſtem, let us only conſider the fruits it has produced, ſince it was new-modelled by DES CARTES. That great reformer in philoſophy ſaw the abſurdity of the doctrine of ideas coming from external objects, and refuted it effectually, after it had been received by Philoſophers for thouſands of years; but he ſtill retained ideas in the brain and in the mind. Upon this foundation all our modern ſyſtems of the powers of the mind are built. And the tottering ſtate of thoſe fabrics, though built by ſkilful hands, may give a ſtrong ſuſpicion of the unſoundneſs of the foundation.

It was this theory of ideas that led DES CARTES, and thoſe that followed him, to think it neceſſary to prove, by philoſophical arguments, the exiſtence of material objects. And who does not ſee that philoſophy muſt make a very ridiculous figure in the eyes of ſenſible men, while it is employed in muſtering up metaphyſical arguments,

guments, to prove that there is a ſun and a moon, an earth and a ſea: Yet we find theſe truly great men, DES CARTES, MALEBRANCHE, ARNAULD, and LOCKE, ſeriouſly employing themſelves in this argument.

Surely their principles led them to think, that all men, from the beginning of the world, believed the exiſtence of theſe things upon inſufficient grounds, and to think that they would be able to place upon a more rational foundation this univerſal belief of mankind. But the misfortune is, that all the laboured arguments they have advanced, to prove the exiſtence of thoſe things we ſee and feel, are mere ſophiſms: Not one of them will bear examination.

I might mention ſeveral paradoxes, which Mr LOCKE, though by no means fond of paradoxes, was led into by this theory of ideas. Such as, that the ſecondary qualities of body are no qualities of body at all, but ſenſations of the mind: That the primary qualities of body are reſemblances of our ſenſations: That we have no notion of duration, but from the ſucceſſion of ideas in our minds: That perſonal identity conſiſts in conſciouſneſs; ſo that the ſame individual thinking being may make two or three different perſons, and ſeveral different thinking beings make one perſon: That judgment is nothing but a perception of the agreement or diſagreement of our

ideas. Moſt of theſe paradoxes I ſhall have occaſion to examine.

However, all theſe conſequences of the doctrine of ideas were tolerable, compared with thoſe which came afterwards to be diſcovered by BERKELEY and HUME: That there is no material world: No abſtract ideas or notions: That the mind is only a train of related impreſſions and ideas, without any ſubject on which they may be impreſſed: That there is neither ſpace nor time, body nor mind, but impreſſions and ideas only: And, to ſum up all, That there is no probability, even in demonſtration itſelf, nor any one propoſition more probable than its contrary.

Theſe are the noble fruits which have grown upon this theory of ideas, ſince it began to be cultivated by ſkilful hands. It is no wonder that ſenſible men ſhould be diſguſted at philoſophy, when ſuch wild and ſhocking paradoxes paſs under its name. However, as theſe paradoxes have, with great acuteneſs and ingenuity, been deduced by juſt reaſoning from the theory of ideas, they muſt at laſt bring this advantage, that poſitions ſo ſhocking to the common ſenſe of mankind, and ſo contrary to the deciſions of all our intellectual powers, will open mens eyes, and break the force of the prejudice which hath held them entangled in that theory.

CHAP.

CHAP. XV.

Account of the Syſtem of LEIBNITZ.

THERE is yet another ſyſtem concerning perception, of which I ſhall give ſome account, becauſe of the fame of its author. It is the invention of the famous German Philoſopher LEIBNITZ, who, while he lived, held the firſt rank among the Germans in all parts of philoſophy, as well as in mathematics, in juriſprudence, in the knowledge of antiquities, and in every branch, both of ſcience and of literature. He was highly reſpected by emperors, and by many kings and princes, who beſtowed upon him ſingular marks of their eſteem. He was a particular favourite of our Queen CAROLINE, conſort of GEORGE II. with whom he continued his correſpondence by letters after ſhe came to the Crown of Britain, till his death.

The famous controverſy between him and the Britiſh Mathematicians, whether he or Sir ISAAC NEWTON was the inventor of that noble improvement in mathematics, called by NEWTON *the method of fluxions*, and by LEIBNITZ *the differential method*, engaged the attention of the Mathematicians in Europe for ſeveral years. He had likewiſe a controverſy with the learned and

judicious Dr SAMUEL CLARKE, about ſeveral points of the Newtonian philoſophy which he diſapproved. The papers which gave occaſion to this controverſy, with all the replies and rejoinders, had the honour to be tranſmitted from the one party to the other through the hands of Queen CAROLINE, and were afterwards publiſhed.

His authority, in all matters of philoſophy, is ſtill ſo great in moſt parts of Germany, that they are conſidered as bold ſpirits, and a kind of heretics, who diſſent from him in any thing. WOLFIUS, the moſt voluminous writer in philoſophy of this age, is conſidered as the great interpreter and advocate of the Leibnitzian ſyſtem, and reveres as an oracle whatever has dropped from the pen of LEIBNITZ. This author propoſed two great works upon the mind. The firſt, which I have ſeen, he publiſhed with the title of *Pſychologia empirica, ſeu experimentalis.* The other was to have the title of *Pſychologia rationalis;* and to it he refers for his explication of the theory of LEIBNITZ with regard to the mind. But whether it was publiſhed I have not learned.

I muſt therefore take the ſhort account I am to give of this ſyſtem from the writings of LEIBNITZ himſelf, without the light which his interpreter WOLFIUS may have thrown upon it.

LEIBNITZ

LEIBNITZ conceived the whole univerſe, bodies as well as minds, to be made up of monads, that is, ſimple ſubſtances, each of which is, by the Creator in the beginning of its exiſtence, endowed with certain active and perceptive powers. A monad, therefore, is an active ſubſtance, ſimple, without parts or figure, which has within itſelf the power to produce all the changes it undergoes from the beginning of its exiſtence to eternity. The changes which the monad undergoes, of what kind ſoever, though they may ſeem to us the effect of cauſes operating from without, yet they are only the gradual and ſucceſſive evolutions of its own internal powers, which would have produced all the ſame changes and motions, although there had been no other being in the univerſe.

Every human ſoul is a monad joined to an organiſed body, which organiſed body conſiſts of an infinite number of monads, each having ſome degree of active and of perceptive power in itſelf. But the whole machine of the body has a relation to that monad which we call the ſoul, which is, as it were, the centre of the whole.

As the univerſe is completely filled with monads, without any chaſm or void, and thereby every body acts upon every other body, according to its vicinity or diſtance, and is mutually reacted upon by every other body, it follows, ſays LEIBNITZ, that every monad is a kind of living

mirror, which reflects the whole univerſe, according to its point of view, and repreſents the whole more or leſs diſtinctly.

I cannot undertake to reconcile this part of the ſyſtem with what was before mentioned, to wit, that every change in a monad is the evolution of its own original powers, and would have happened though no other ſubſtance had been created. But to proceed.

There are different orders of monads, ſome higher, and others lower. The higher orders he calls dominant; ſuch is the human ſoul. The monads that compoſe the organiſed bodies of men, animals and plants, are of a lower order, and ſubſervient to the dominant monads. But every monad of whatever order, is a complete ſubſtance in itſelf, indiviſible, having no parts, indeſtructable, becauſe, having no parts, it cannot periſh by any kind of decompoſition; it can only periſh by annihilation, and we have no reaſon to believe that God will ever annihilate any of the beings which he has made.

The monads of a lower order may, by a regular evolution of their powers, riſe to a higher order. They may ſucceſſively be joined to organiſed bodies, of various forms and different degrees of perception; but they never die, nor ceaſe to be in ſome degree active and percipient.

This Philoſopher makes a diſtinction between perception and what he calls *apperception*. The

firſt is common to all monads, the laſt proper to the higher orders, among which are human ſouls.

By apperception he underſtands that degree of perception which reflects, as it were, upon itſelf; by which we are conſcious of our own exiſtence, and conſcious of our perceptions; by which we can reflect upon the operations of our own minds, and can comprehend abſtract truths. The mind, in many operations, he thinks, particularly in ſleep, and in many actions common to us with the brutes, has not this apperception, althought it is ſtill filled with a multitude of obſcure and indiſtinct perceptions, of which we are not conſcious.

He conceives that our bodies and minds are united in ſuch a manner, that neither has any phyſical influence upon the other. Each performs all its operations by its own internal ſprings and powers; yet the operations of one correſpond exactly with thoſe of the other, by a pre-eſtabliſhed harmony; juſt as one clock may be ſo adjuſted as to keep time with another, although each has its own moving power, and neither receives any part of its motion from the other.

So that according to this ſyſtem all our perceptions of external objects would be the ſame, though external things had never exiſted; our perception of them would continue, although, by the power of God, they ſhould this moment be

be annihilated: We do not perceive external things becauſe they exiſt, but becauſe the ſoul was originally ſo conſtituted as to produce in itſelf all its ſucceſſive changes, and all its ſucceſſive perceptions, independently of the external objects.

Every perception or apperception, every operation, in a word, of the ſoul, is a neceſſary conſequence of the ſtate of it immediately preceding that operation; and this ſtate is the neceſſary conſequence of the ſtate preceding it; and ſo backwards, until you come to its firſt formation and conſtitution, which produces ſucceſſively, and by neceſſary conſequence, all its ſucceſſive ſtates to the end of its exiſtence: So that in this reſpect the ſoul, and every monad, may be compared to a watch wound up, which having the ſpring of its motion in itſelf, by the gradual evolution of its own ſpring, produces all the ſucceſſive motions we obſerve in it.

In this account of LEIBNITZ ſyſtem concerning monads, and the pre-eſtabliſhed harmony, I have kept as nearly as I could to his own expreſſions, in his *new ſyſtem of the nature, and communication of ſubſtances, and of the union of ſoul and body;* and in the ſeveral illuſtrations of that new ſyſtem which he afterwards publiſhed; and in his *principles of nature and grace founded in reaſon.* I ſhall now make a few remarks upon this ſyſtem.

1. To

1. To paſs over the irreſiſtible neceſſity of all human actions, which makes a part of this ſyſtem, that will be conſidered in another place, I obſerve firſt, that the diſtinction made between perception and apperception is obſcure and unphiloſophical: As far as we can diſcover, every operation of our mind is attended with conſciouſneſs, and particularly that which we call the perception of external objects; and to ſpeak of a perception of which we are not conſcious, is to ſpeak without any meaning.

As conſciouſneſs is the only power by which we diſcern the operations of our own minds, or can form any notion of them, an operation of mind of which we are not conſcious, is, we know not what; and to call ſuch an operation by the name of perception, is an abuſe of language. No man can perceive an object, without being conſcious that he perceives it. No man can think, without being conſcious that he thinks. What men are not conſcious of, cannot therefore, without impropriety, be called either perception or thought of any kind. And if we will ſuppoſe operations of mind, of which we are not conſcious, and give a name to ſuch creatures of our imagination, that name muſt ſignify what we know nothing about.

2. To ſuppoſe bodies organiſed or unorganiſed, to be made up of indiviſible monads which have

have no parts, is contrary to all that we know of body. It it eſſential to a body to have parts; and every part of a body, is a body, and has parts alſo. No number of parts, without extenſion or figure, not even an infinite number, if we may uſe that expreſſion, can, by being put together, make a whole that has extenſion and figure, which all bodies have.

3. It is contrary to all that we know of bodies, to aſcribe to the monads, of which they are ſuppoſed to be compounded, perception and active force. If a Philoſopher thinks proper to ſay, that a clod of earth both perceives and has active force, let him bring his proofs. But he ought not to expect, that men who have underſtanding, will ſo far give it up as to receive without proof whatever his imagination may ſuggeſt.

4. This ſyſtem overturns all authority of our ſenſes, and leaves not the leaſt ground to believe the exiſtence of the objects of ſenſe, or the exiſtence of any thing which depends upon the authority of our ſenſes; for our perception of objects, according to this ſyſtem, has no dependence upon any thing external, and would be the ſame as it is, ſuppoſing external objects had never exiſted, or that they were from this moment annihilated.

It is remarkable that LEIBNITZ's ſyſtem, that of MALEBRANCHE, and the common ſyſtem of ideas, or images of external objects in the mind, do all agree in overturning all the authority of our

our ſenſes; and this one thing, as long as men retain their ſenſes, will always make all theſe ſyſtems truly ridiculous.

5. The laſt obſervation I ſhall make upon this ſyſtem, which indeed is equally applicable to all the ſyſtems of perception I have mentioned, is, that it is all hypotheſis, made up of conjectures and ſuppoſitions, without proof. The Peripatetics ſuppoſed ſenſible *ſpecies* to be ſent forth by the objects of ſenſe. The moderns ſuppoſe ideas in the brain, or in the mind. MALEBRANCHE ſuppoſed, that we perceive the ideas of the Divine Mind. LEIBNITZ ſuppoſed monads and a pre-eſtabliſhed harmony; and theſe monads being creatures of his own making, he is at liberty to give them what properties and powers his fancy may ſuggeſt. In like manner, the Indian Philoſopher ſuppoſed that the earth is ſupported by a huge elephant, and that the elephant ſtands on the back of a huge tortoiſe.

Such ſuppoſitions, while there is no proof of them offered, are nothing but the fictions of human fancy; and we ought no more to believe them, than we believe HOMER's fictions of APOLLO's ſilver bow, or MINERVA's ſhield, or VENUS's girdle. Such fictions in poetry are agreeable to the rules of the art: They are intended to pleaſe, not to convince. But the I loſophers would have us to believe their fiction though the account they give of the phænomena

of

of nature has commonly no more probability than the account that HOMER gives of the plague in the Grecian camp, from APOLLO taking his ſtation on a neighbouring mountain, and from his ſilver bow, letting fly his ſwift arrows into the camp.

Men then only begin to have a true taſte in philoſophy, when they have learned to hold hypotheſes in juſt contempt; and to conſider them as the reveries of ſpeculative men, which will never have any ſimilitude to the works of God.

The Supreme Being has given us ſome intelligence of his work, by what our ſenſes inform us of external things, and by what our conſciouſneſs and reflection inform us concerning the operations of our own minds. Whatever can be inferred from theſe common informations, by juſt and ſound reaſoning, is true and legitimate philoſophy: But what we add to this from conjecture is all ſpurious and illegitimate.

After this long account of the theories advanced by Philoſophers, to account for our perception of external objects, I hope it will appear, that neither ARISTOTLE's theory of ſenſible ſpecies, nor MALEBRANCHE's, of our ſeeing things in God, nor the common theory of our perceiving ideas in our own minds, nor LEIBNITZ's theory of monads, and a pre-eſtabliſhed harmony, give any ſatisfying account of this power of the mind, or make it more intelligible than it is without their aid.

aid. They are conjectures, and if they were true, would ſolve no difficulty, but raiſe many new ones. It is therefore more agreeable to good ſenſe, and to ſound philoſophy, to reſt ſatisfied with what our conſciouſneſs and attentive reflection diſcover to us of the nature of perception, than by inventing hypotheſes, to attempt to explain things which are above the reach of human underſtanding. I believe no man is able to explain how we perceive external objects, any more than how we are conſcious of thoſe that are internal. Perception, conſciouſneſs, memory, and imagination, are all original and ſimple powers of the mind, and parts of its conſtitution. For this reaſon, though I have endeavoured to ſhow, that the theories of Philoſophers on this ſubject are ill grounded and inſufficient, I do not attempt to ſubſtitute any other theory in their place.

Every man feels that perception gives him an invincible belief of the exiſtence of that which he perceives; and that this belief is not the effect of reaſoning, but the immediate conſequence of perception. When Philoſophers have wearied themſelves and their readers with their ſpeculations upon this ſubject, they can neither ſtrengthen this belief, nor weaken it; nor can they ſhow how it is produced. It puts the Philoſopher and the peaſant upon a level; and neither of them can give any other reaſon for believing his ſenſes,

ſenſes, than that he finds it impoſſible for him to do otherwiſe.

CHAP. XVI.

Of Senſation.

HAVING finiſhed what I intend, with regard to that act of mind which we call the perception of an external object, I proceed to conſider another, which, by our conſtitution, is conjoined with perception, and not with perception only, but with many other acts of our minds; and that is ſenſation. To prevent repetition, I muſt refer the reader to the explication of this word given in Eſſay I. chap. 1.

Almoſt all our perceptions have correſponding ſenſations which conſtantly accompany them, and, on that account, are very apt to be confounded with them. Neither ought we to expect, that the ſenſation, and its correſponding perception, ſhould be diſtinguiſhed in common language, becauſe the purpoſes of common life do not require it. Language is made to ſerve the purpoſes of ordinary converſation; and we have no reaſon to expect that it ſhould make diſtinctions that are not of common uſe. Hence it happens, that a quality perceived, and the ſenſation

ſation correſponding to that perception, often go under the ſame name.

This makes the names of moſt of our ſenſations ambiguous, and this ambiguity hath very much perplexed philoſophers. It will be neceſſary to give ſome inſtances, to illuſtrate the diſtinction between our ſenſations and the objects of perception.

When I ſmell a roſe, there is in this operation both ſenſation and perception. The agreeable odour I feel, conſidered by itſelf, without relation to any external object, is merely a ſenſation. It affects the mind in a certain way; and this affection of the mind may be conceived without a thought of the roſe, or any other object. This ſenſation can be nothing elſe than it is felt to be. Its very eſſence conſiſts in being felt; and when it is not felt, it is not. There is no difference between the ſenſation and the feeling of it; they are one and the ſame thing. It is for this reaſon, that we before obſerved, that, in ſenſation, there is no object diſtinct from that act of the mind by which it is felt; and this holds true with regard to all ſenſations.

Let us next attend to the perception which we have in ſmelling a roſe. Perception has always an external object; and the object of my perception, in this caſe, is that quality in the roſe which I diſcern by the ſenſe of ſmell. Obſerving that the agreeable ſenſation is raiſed

when the roſe is near, and ceaſes when it is removed, I am led, by my nature, to conclude ſome quality to be in the roſe, which is the cauſe of this ſenſation. This quality in the roſe is the object perceived; and that act of my mind, by which I have the conviction and belief of this quality, is what in this caſe I call perception.

But it is here to be obſerved, that the ſenſation I feel, and the quality in the roſe which I perceive, are both called by the ſame name. The ſmell of a roſe is the name given to both: So that this name hath two meanings; and the diſtinguiſhing its different meanings removes all perplexity, and enables us to give clear and diſtinct anſwers to queſtions, about which Philoſophers have held much diſpute.

Thus, if it is aſked, Whether the ſmell be in the roſe, or in the mind that feels it? The anſwer is obvious: That there are two different things ſignified by the ſmell of a roſe; one of which is in the mind, and can be in nothing but in a ſentient being; the other is truly and properly in the roſe. The ſenſation which I feel is in my mind. The mind is the ſentient being; and as the roſe is inſentient, there can be no ſenſation, nor any thing reſembling ſenſation in it. But this ſenſation in my mind is occationed by a certain quality in the roſe, which is called by the ſame name with the ſenſation, not on account

of

of any ſimilitude, but becauſe of their conſtant concomitancy.

All the names we have for ſmells, taſtes, ſounds, and for the various degrees of heat and cold, have a like ambiguity; and what has been ſaid of the ſmell of a roſe may be applied to them. They ſignify both a ſenſation, and a quality perceived by means of that ſenſation. The firſt is the ſign, the laſt the thing ſignified. As both are conjoined by nature, and as the purpoſes of common life do not require them to be disjoined in our thoughts, they are both expreſſed by the ſame name: And this ambiguity is to be found in all languages, becauſe the reaſon of it extends to all.

The ſame ambiguity is found in the names of ſuch diſeaſes as are indicated by a particular painful ſenſation: Such as the toothach, the headach. The toothach ſignifies a painful ſenſation, which can only be in a ſentient being; but it ſignifies alſo a diſorder in the body, which has no ſimilitude to a ſenſation, but is naturally connected with it.

Preſſing my hand with force againſt the table, I feel pain, and I feel the table to be hard. The pain is a ſenſation of the mind, and there is nothing that reſembles it in the table. The hardneſs is in the table, nor is there any thing reſembling it in the mind. Feeling is applied to both; but in a different ſenſe; being a word common to

the act of ſenſation, and to that of perceiving by the ſenſe of touch.

I touch the table gently with my hand, and I feel it to be ſmooth, hard, and cold. Theſe are qualities of the table perceived by touch; but I perceive them by means of a ſenſation which indicates them. This ſenſation not being painful, I commonly give no attention to it. It carries my thought immediately to the thing ſignified by it, and is itſelf forgot, as if it had never been. But by repeating it, and turning my attention to it, and abſtracting my thought from the thing ſignified by it, I find it to be merely a ſenſation, and that it has no ſimilitude to the hardneſs, ſmoothneſs, or coldneſs of the table which are ſignified by it.

It is indeed difficult, at firſt, to disjoin things in our attention which have always been conjoined, and to make that an object of reflection which never was ſo before; but ſome pains and practice will overcome this difficulty in thoſe who have got the habit of reflecting on the operations of their own minds.

Although the preſent ſubject leads us only to conſider the ſenſations which we have by means of our external ſenſes, yet it will ſerve to illuſtrate what has been ſaid, and I apprehend is of importance in itſelf to obſerve, that many operations of mind, to which we give one name, and which we always conſider as one thing, are complex

complex in their nature, and made up of ſeveral more ſimple ingredients; and of theſe ingredients ſenſation very often makes one. Of this we ſhall give ſome inſtances.

The appetite of hunger includes an uneaſy ſenſation, and a deſire of food. Senſation and deſire are different acts of mind. The laſt, from its nature, muſt have an object; the firſt has no object. Theſe two ingredients may always be ſeparated in thought; perhaps they ſometimes are, in reality; but hunger includes both.

Benevolence towards our fellow-creatures includes an agreeable feeling; but it includes alſo a deſire of the happineſs of others. The ancients commonly called it deſire: Many moderns chooſe rather to call it a feeling. Both are right; and they only err who exclude either of the ingredients. Whether theſe two ingredients are neceſſarily connected, is perhaps difficult for us to determine, there being many neceſſary connections which we do not perceive to be neceſſary; but we can disjoin them in thought. They are different acts of the mind.

An uneaſy feeling, and a deſire, are in like manner the ingredients of malevolent affections; ſuch as malice, envy, revenge. The paſſion of fear includes an uneaſy ſenſation or feeling, and an opinion of danger; and hope is made up of the contrary ingredients. When we hear of a heroic action, the ſentiment which it raiſes in

our mind is made up of various ingredients. There is in it an agreeable feeling, a benevolent affection to the perſon, and a judgment or opinion of his merit.

If we thus analyſe the various operations of our minds, we ſhall find, that many of them which we conſider as perfectly ſimple, becauſe we have been accuſtomed to call them by one name, are compounded of more ſimple ingredients; and that ſenſation, or feeling, which is only a more refined kind of ſenſation, makes one ingredient, not only in the perception of external objects, but in moſt operations of the mind.

A ſmall degree of reflection may ſatisfy us, that the number and variety of our ſenſations and feelings is prodigious: For, to omit all thoſe which accompany our appetites, paſſions, and affections, our moral ſentiments, and ſentiments of taſte, even our external ſenſes furniſh a great variety of ſenſations differing in kind, and almoſt in every kind an endleſs variety of degrees. Every variety we diſcern, with regard to taſte, ſmell, ſound, colour, heat and cold, and in the tangible qualities of bodies, is indicated by a ſenſation correſponding to it.

The moſt general and the moſt important diviſion of our ſenſations and feelings, is into the agreeable, the diſagreeable, and the indifferent. Every thing we call pleaſure, happineſs, or enjoyment,

on

on the one hand; and on the other, every thing we call miſery, pain, or uneaſineſs, is ſenſation or feeling: For no man can for the preſent be more happy, or more miſerable than he feels himſelf to be. He cannot be deceived with regard to the enjoyment or ſuffering of the preſent moment.

But I apprehend, that beſides the ſenſations that are either agreeable or diſagreeable, there is ſtill a greater number that are indifferent. To theſe we give ſo little attention that they have no name, and are immediately forgot as if they had never been; and it requires attention to the operations of our minds to be convinced of their exiſtence.

For this end we may obſerve, that to a good ear every human voice is diſtinguiſhable from all others. Some voices are pleaſant, ſome diſagreeable; but the far greater part can neither be ſaid to be one or the other. The ſame thing may be ſaid of other ſounds, and no leſs of taſtes, ſmells, and colours; and if we conſider that our ſenſes are in continual exerciſe while we are awake, that ſome ſenſation attends every object they preſent to us, and that familiar objects ſeldom raiſe any emotion pleaſant or painful; we ſhall ſee reaſon, beſides the agreeable and diſagreeable, to admit a third claſs of ſenſations, that may be called indifferent.

The ſenſations that are indifferent, are far from being uſeleſs. They ſerve as ſigns to diſtinguiſh things that differ; and the information we have concerning things external, comes by their means. Thus, if a man had no ear to receive pleaſure from the harmony or melody of ſounds, he would ſtill find the ſenſe of hearing of great utility: Though ſounds gave him neither pleaſure nor pain of themſelves, they would give him much uſeful information; and the like may be ſaid of the ſenſations we have by all the other ſenſes.

As to the ſenſations and feelings that are agreeable or diſagreeable, they differ much, not only in degree, but in kind and in dignity. Some belong to the animal part of our nature, and are common to us with the brutes: Others belong to the rational and moral part. The firſt are more properly called *ſenſations*, the laſt *feelings*. The French word *ſentiment* is common to both.

The intention of Nature in them is for the moſt part obvious, and well deſerving our notice. It has been beautifully illuſtrated by a very elegant French writer, in his *Theorie des ſentiments agreeables*.

The author of Nature, in the diſtribution of agreeable and painful feelings, hath wiſely and benevolently conſulted the good of the human ſpecies, and hath even ſhown us, by the ſame means,

means, what tenor of conduct we ought to hold. For, *firſt*, The painful ſenſations of the animal kind are admonitions to avoid what would hurt us; and the agreeable ſenſations of this kind, invite us to thoſe actions that are neceſſary to the preſervation of the individual, or of the kind. *Secondly*, By the ſame means nature invites us to moderate bodily exerciſe, and admoniſhes us to avoid idleneſs and inactivity on the one hand, and exceſſive labour and fatigue on the other. *Thirdly*, The moderate exerciſe of all our rational powers gives pleaſure. *Fourthly*, Every ſpecies of beauty is beheld with pleaſure, and every ſpecies of deformity with diſguſt; and we ſhall find all that we call beautiful, to be ſomething eſtimable or uſeful in itſelf, or a ſign of ſomething that is eſtimable or uſeful. *Fifthly*, The benevolent affections are all accompanied with an agreeable feeling, the malevolent with the contrary. And, *ſixthly*, The higheſt, the nobleſt, and moſt durable pleaſure, is that of doing well, and acting the part that becomes us; and the moſt bitter and painful ſentiment, the anguiſh and remorſe of a guilty conſcience. Theſe obſervations, with regard to the œconomy of Nature in the diſtribution of our painful and agreeable ſenſations and feelings, are illuſtrated by the author laſt mentioned, ſo elegantly and judiciouſly, that I ſhall not attempt to ſay any thing upon them after him.

I ſhall conclude this chapter by obſerving, that as the confounding our ſenſations with that perception of external objects, which is conſtantly conjoined with them, has been the occaſion of moſt of the errors and falſe theories of Philoſophers with regard to the ſenſes; ſo the diſtinguiſhing theſe operations ſeems to me to be the key that leads to a right underſtanding of both.

Senſation, taken by itſelf, implies neither the conception nor belief of any external object. It ſuppoſes a ſentient being, and a certain manner in which that being is affected, but it ſuppoſes no more. Perception implies an immediate conviction and belief of ſomething external; ſomething different both from the mind that perceives, and from the act of perception. Things ſo different in their nature ought to be diſtinguiſhed; but by our conſtitution they are always united. Every different perception is conjoined with a ſenſation that is proper to it. The one is the ſign, the other the thing ſignified. They coaleſce in our imagination. They are ſignified by one name, and are conſidered as one ſimple operation. The purpoſes of life do not require them to be diſtinguiſhed.

It is the Philoſopher alone who has occaſion to diſtinguiſh them, when he would analyſe the operation compounded of them. But he has no ſuſpicion that there is any compoſition in it; and to diſcover this requires a degree of reflection

tion which has been too little practiſed even by Philoſophers.

In the old philoſophy, ſenſation and perception were perfectly confounded. The ſenſible ſpecies coming from the object, and impreſſed upon the mind, was the whole; and you might call it ſenſation or perception as you pleaſed.

Des Cartes and Locke, attending more to the operations of their own minds, ſay, That the ſenſations by which we have notice of ſecondary qualities, have no reſemblance to any thing that pertains to body; but they did not ſee that this might with equal juſtice be applied to the primary qualities. Mr Locke maintains, that the ſenſations we have from primary qualities are reſemblances of thoſe qualities. This ſhows how groſsly the moſt ingenious men may err with regard to the operations of their minds. It muſt indeed be acknowledged, that it is much eaſier to have a diſtinct notion of the ſenſations that belong to ſecondary, than of thoſe that belong to the primary qualities. The reaſon of this will appear in the next chapter.

But had Mr Locke attended with ſufficient accuracy to the ſenſations which he was every day and every hour receiving from primary qualities, he would have ſeen, that they can as little reſemble any quality of an inanimated being, as pain can reſemble a cube or a circle.

What

What had eſcaped this ingenious Philoſopher, was clearly diſcerned by Biſhop BERKELEY. He had a juſt notion of ſenſations, and ſaw that it was impoſſible that any thing in an inſentient being could reſemble them; a thing ſo evident in itſelf, that it ſeems wonderful that it ſhould have been ſo long unknown.

But let us attend to the conſequence of this diſcovery. Philoſophers, as well as the vulgar, had been accuſtomed to comprehend both ſenſation and perception under one name, and to conſider them as one uncompounded operation. Philoſophers, even more than the vulgar, gave the name of ſenſation to the whole operation of the ſenſes; and all the notions we have of material things were called ideas of ſenſation. This led Biſhop BERKELEY to take one ingredient of a complex operation for the whole; and having clearly diſcovered the nature of ſenſation, taking it for granted, that all that the ſenſes preſent to the mind is ſenſation, which can have no reſemblance to any thing material, he concluded that there is no material world.

If the ſenſes furniſhed us with no materials of thought but ſenſations, his concluſion muſt be juſt; for no ſenſation can give us the conception of material things, far leſs any argument to prove their exiſtence. But if it is true that by our ſenſes we have not only a variety of ſenſations, but likewiſe a conception, and an immediate

diate natural conviction of external objects, he reaſons from a falſe ſuppoſition, and his arguments fall to the ground.

CHAP. XVII.

Of the Objects of Perception; and firſt, Of primary and ſecondary Qualities.

THE objects of perception are the various qualities of bodies. Intending to treat of theſe only in general, and chiefly with a view to explain the notions which our ſenſes give us of them, I begin with the diſtinction between primary and ſecondary qualities. Theſe were diſtinguiſhed very early. The Peripatetic ſyſtem confounded them, and left no difference. The diſtinction was again revived by DES CARTES and LOCKE, and a ſecond time aboliſhed by BERKELEY and HUME. If the real foundation of this diſtinction can be pointed out, it will enable us to account for the various revolutions in the ſentiments of Philoſophers concerning it.

Every one knows that extenſion, diviſibility, figure, motion, ſolidity, hardneſs, ſoftneſs, and fluidity, were by Mr LOCKE called *primary qualities of body*; and that ſound, colour, taſte, ſmell, and heat or cold, were called *ſecondary qualities*.

qualities. Is there a juſt foundation for this diſtinction? Is there any thing common to the primary which belongs not to the ſecondary? And what is it?

I anſwer, That there appears to me to be a real foundation for the diſtinction; and it is this: That our ſenſes give us a direct and a diſtinct notion of the primary qualities, and inform us what they are in themſelves: But of the ſecondary qualities, our ſenſes give us only a relative and obſcure notion. They inform us only, that they are qualities that affect us in a certain manner, that is, produce in us a certain ſenſation; but as to what they are in themſelves our ſenſes leave us in the dark.

Every man capable of reflection may eaſily ſatisfy himſelf, that he has a perfectly clear and diſtinct notion of extenſion, diviſibility, figure, and motion. The ſolidity of a body means no more, but that it excludes other bodies from occupying the ſame place at the ſame time. Hardneſs, ſoftneſs, and fluidity, are different degrees of coheſion in the parts of a body. It is fluid, when it has no ſenſible coheſion; ſoft when the coheſion is weak; and hard when it is ſtrong: Of the cauſe of this coheſion we are ignorant, but the thing itſelf we underſtand perfectly, being immediately informed of it by the ſenſe of touch. It is evident, therefore, that of the primary qualities we have a clear and diſtinct no-

tion;

tion; we know what they are, though we may be ignorant of their cauſes.

I obſerved further, that the notion we have of primary qualities is direct, and not relative only. A relative notion of a thing, is, ſtrictly ſpeaking, no notion of the thing at all, but only of ſome relation which it bears to ſomething elſe.

Thus gravity ſometimes ſignifies the tendency of bodies towards the earth; ſometimes it ſignifies the cauſe of that tendency: When it means the firſt, I have a direct and diſtinct notion of gravity: I ſee it, and feel it, and know perfectly what it is; but this tendency muſt have a cauſe: We give the ſame name to the cauſe; and that cauſe has been an object of thought and of ſpeculation. Now what notion have we of this cauſe when we think and reaſon about it? It is evident, we think of it as an unknown cauſe, of a known effect. This is a relative notion, and it muſt be obſcure, becauſe it gives us no conception of what the thing is, but of what relation it bears to ſomething elſe. Every relation which a thing unknown bears to ſomething that is known, may give a relative notion of it; and there are many objects of thought, and of diſcourſe, of which our faculties can give no better than a relative notion.

Having premiſed theſe things to explain what is meant by a relative notion, it is evident, that our notion of primary qualities is not of this kind;

kind; we know what they are, and not barely what relation they bear to ſomething elſe.

It is otherwiſe with ſecondary qualities. If you aſk me, what is that quality or modification in a roſe which I call its ſmell, I am at a loſs to anſwer directly. Upon reflection I find, that I have a diſtinct notion of the ſenſation which it produces in my mind. But there can be nothing like to this ſenſation in the roſe, becauſe it is inſentient. The quality in the roſe is ſomething which occaſions the ſenſation in me; but what that ſomething is, I know not. My ſenſes give me no information upon this point. The only notion therefore my ſenſes give is this, That ſmell in the roſe is an unknown quality or modification, which is the cauſe or occaſion of a ſenſation which I know well. The relation which this unknown quality bears to the ſenſation with which nature hath connected it, is all I learn from the ſenſe of ſmelling; but this is evidently a relative notion. The ſame reaſoning will apply to every ſecondary quality.

Thus I think it appears, that there is a real foundation for the diſtinction of primary from ſecondary qualities; and that they are diſtinguiſhed by this, that of the primary we have by our ſenſes a direct and diſtinct notion; but of the ſecondary only a relative notion, which muſt, becauſe it is only relative, be obſcure; they are conceived only as the unknown cauſes or occaſions

ſions of certain ſenſations with which we are well acquainted.

The account I have given of this diſtinction is founded upon no hypotheſis. Whether our notions of primary qualities are direct and diſtinct, thoſe of the ſecondary relative and obſcure, is a matter of fact, of which every man may have certain knowledge by attentive reflection upon them. To this reflection I appeal, as the proper teſt of what has been advanced, and proceed to make ſome reflections on this ſubject.

1. The primary qualities are neither ſenſations, nor are they reſemblances of ſenſations. This appears to me ſelf-evident. I have a clear and diſtinct notion of each of the primary qualities. I have a clear and diſtinct notion of ſenſation. I can compare the one with the other; and when I do ſo, I am not able to diſcern a reſembling feature. Senſation is the act, or the feeling, (I diſpute not which) of a ſentient being. Figure, diviſibility, ſolidity, are neither acts nor feelings. Senſation ſuppoſes a ſentient being as its ſubject; for a ſenſation that is not felt by ſome ſentient being, is an abſurdity. Figure and diviſibility ſuppoſes a ſubject that is figured and diviſible, but not a ſubject that is ſentient.

2. We have no reaſon to think, that the ſenſations by which we have notice of ſecondary

qualities reſemble any quality of body. The abſurdity of this notion has been clearly ſhown by DES CARTES, LOCKE, and many modern Philoſophers. It was a tenet of the ancient philoſophy, and is ſtill by many imputed to the vulgar, but only as a vulgar error. It is too evident to need proof, that the vibrations of a ſounding body do not reſemble the ſenſation of ſound, nor the effluvia of an odorous body the ſenſation of ſmell.

3. The diſtinctneſs of our notions of primary qualities prevents all queſtions and diſputes about their nature. There are no different opinions about the nature of extenſion, figure, or motion, or the nature of any primary quality. There nature is manifeſt to our ſenſes, and cannot be unknown to any man, or miſtaken by him, though their cauſes may admit of diſpute.

The primary qualities are the object of the mathematical ſciences; and the diſtinctneſs of our notions of them enables us to reaſon demonſtratively about them to a great extent. Their various modifications are preciſely defined in the imagination, and thereby capable of being compared, and their relations determined with preciſion and certainty.

It is not ſo with ſecondary qualities. Their nature not being manifeſt to the ſenſe, may be a ſubject of diſpute. Our feeling informs us that the

the fire is hot; but it does not inform us what that heat of the fire is. But does it not appear a contradiction, to ſay we know that the fire is hot, but we know not what that heat is? I anſwer? There is the ſame appearance of contradiction in many things, that muſt be granted. We know that wine has an inebriating quality; but we know not what that quality is. It is true, indeed, that if we had not ſome notion of what is meant by the heat of fire, and by an inebriating quality, we could affirm nothing of either with underſtanding. We have a notion of both; but it is only a relative notion. We know that they are the cauſes of certain known effects.

4. The nature of ſecondary qualities is a proper ſubject of philoſophical diſquiſition; and in this philoſophy has made ſome progreſs. It has been diſcovered, that the ſenſation of ſmell is occaſioned by the effluvia of bodies; that of ſound by their vibration. The diſpoſition of bodies to reflect a particular kind of light occaſions the ſenſation of colour. Very curious diſcoveries have been made of the nature of heat, and an ample field of diſcovery in theſe ſubjects remains.

5. We may ſee why the ſenſations belonging to ſecondary qualities are an object of our attention, while thoſe which belong to the primary are not.

The firſt are not only ſigns of the object perceived, but they bear a capital part in the notion

we form of it. We conceive it only as that which occaſions ſuch a ſenſation, and therefore cannot reflect upon it without thinking of the ſenſation which it occaſions: We have no other mark whereby to diſtinguiſh it. The thought of a ſecondary quality, therefore, always carries us back to the ſenſation which it produces. We give the ſame name to both, and are apt to confound them together.

But having a clear and diſtinct conception of primary qualities, we have no need when we think of them to recal their ſenſations. When a primary quality is perceived, the ſenſation immediately leads our thought to the quality ſignified by it, and is itſelf forgot. We have no occaſion afterwards to reflect upon it; and ſo we come to be as little acquainted with it, as if we had never felt it. This is the caſe with the ſenſations of all primary qualities, when they are not ſo painful or pleaſant as to draw our attention.

When a man moves his hand rudely againſt a pointed hard body, he feels pain, and may eaſily be perſuaded that this pain is a ſenſation, and that there is nothing reſembling it in the hard body; at the ſame time he perceives the body to be hard and pointed, and he knows that theſe qualities belong to the body only. In this caſe, it is eaſy to diſtinguiſh what he feels from what he perceives.

Let

Let him again touch the pointed body gently, ſo as to give him no pain; and now you can hardly perſuade him that he feels any thing but the figure and hardneſs of the body; ſo difficult it is to attend to the ſenſations belonging to primary qualities, when they are neither pleaſant nor painful. They carry the thought to the external object, and immediatly diſappear and are forgot. Nature intended them only as ſigns; and when they have ſerved that purpoſe they vaniſh.

We are now to conſider the opinions both of the vulgar, and of Philoſophers upon this ſubject. As to the former, it is not to be expected that they ſhould make diſtinctions which have no connection with the common affairs of life; they do not therefore diſtinguiſh the primary from the ſecondary qualities, but ſpeak of both as being equally qualities of the external object. Of the primary qualities they have a diſtinct notion, as they are immediately and diſtinctly perceived by the ſenſes; of the ſecondary, their notions, as I apprehend, are confuſed and indiſtinct, rather than erroneous. A ſecondary quality is the unknown cauſe or occaſion of a well known effect; and the ſame name is common to the cauſe and the effect. Now, to diſtinguiſh clearly the different ingredients of a complex notion, and, at the ſame time, the different meanings of an ambiguous word, is the work of a Philoſo-

pher; and is not to be expected of the vulgar, when their occaſions do not require it.

I grant, therefore, that the notion which the vulgar have of ſecondary qualities, is indiſtinct and inaccurate. But there ſeems to be a contradiction between the vulgar and the Philoſopher upon this ſubject, and each charges the other with a groſs abſurdity. The vulgar ſay, That fire is hot, and ſnow cold, and ſugar ſweet; and that to deny this is a groſs abſurdity, and contradicts the teſtimony of our ſenſes. The Philoſopher ſays, That heat, and cold, and ſweetneſs, are nothing but ſenſations in our minds; and it is abſurd to conceive, that theſe ſenſations are in the fire, or in the ſnow, or in the ſugar.

I believe this contradiction between the vulgar and the Philoſopher is more apparent than real; and that it is owing to an abuſe of language on the part of the Philoſopher, and to indiſtinct notions on the part of the vulgar. The Philoſopher ſays, There is no heat in the fire, meaning, that the fire has not the ſenſation of heat. His meaning is juſt; and the vulgar will agree with him, as ſoon as they underſtand his meaning: But his language is improper; for there is really a quality in the fire, of which the proper name is heat; and the name of heat is given to this quality, both by Philoſophers and by the vulgar, much more frequently than to the ſenſation of heat. This ſpeech of the Philoſo-

pher,

pher, therefore, is meant by him in one ſenſe; it is taken by the vulgar in another ſenſe. In the ſenſe in which they take it, it is indeed abſurd, and ſo they hold it to be. In the ſenſe in which he means it, it is true; and the vulgar, as ſoon as they are made to underſtand that ſenſe, will acknowledge it to be true. They know as well as the Philoſopher, that the fire does not feel heat; and this is all that he means by ſaying there is no heat in the fire.

In the opinions of Philoſophers about primary and ſecondary qualities, there have been, as was before obſerved, ſeveral revolutions: They were diſtinguiſhed long before the days of ARISTOTLE, by the ſect called Atomiſts; among whom DEMOCRITUS made a capital figure. In thoſe times, the name of *quality* was applied only to thoſe we call ſecondary qualities; the primary being conſidered as eſſential to matter, were not called qualities. That the atoms, which they held to be the firſt principles of things, were extended, ſolid, figured, and moveable, there was no doubt; but the queſtion was, whether they had ſmell, taſte, and colour? or, as it was commonly expreſſed, whether they had qualities? The Atomiſts maintained, that they had not; that the qualities were not in bodies, but were ſomething reſulting from the operation of bodies upon our ſenſes.

It would ſeem, that when men began to ſpeculate upon this ſubject, the primary qualities appeared ſo clear and manifeſt, that they could entertain no doubt of their exiſtence wherever matter exiſted; but the ſecondary ſo obſcure, that they were at a loſs where to place them. They uſed this compariſon; as fire, which is neither in the flint nor in the ſteel, is produced by their colliſion, ſo thoſe qualities, though not in bodies, are produced by their impulſe upon our ſenſes.

This doctrine was oppoſed by ARISTOTLE. He believed taſte and colour to be ſubſtantial forms of bodies, and that their ſpecies, as well as thoſe of figure and motion, are received by the ſenſes.

In believing, that what we commonly call *taſte* and *colour* is ſomething really inherent in body, and does not depend upon its being taſted and ſeen, he followed nature. But, in believing that our ſenſations of taſte and colour are the forms or ſpecies of thoſe qualities received by the ſenſes, he followed his own theory, which was an abſurd fiction. DES CARTES not only ſhowed the abſurdity of ſenſible ſpecies received by the ſenſes, but gave a more juſt and more intelligible account of ſecondary qualities than had been given before. Mr LOCKE followed him, and beſtowed much pains upon this ſubject. He was the firſt, I think, that gave them the name of ſecondary

condary qualities, which has been very generally adopted. He diſtinguiſhed the ſenſation from the quality in the body which is the cauſe or occaſion of that ſenſation, and ſhowed that there neither is nor can be any ſimilitude between them.

By this account, the ſenſes are acquitted of putting any fallacy upon us; the ſenſation is real, and no fallacy; the quality in the body, which is the cauſe or occaſion of this ſenſation, is likewiſe real, though the nature of it is not manifeſt to our ſenſes. If we impoſe upon ourſelves, by confounding the ſenſation with the quality that occaſions it, this is owing to raſh judgment, or weak underſtanding, but not to any falſe teſtimony of our ſenſes.

This account of ſecondary qualities I take to be very juſt; and, if Mr LOCKE had ſtopped here, he would have left the matter very clear. But he thought it neceſſary to introduce the theory of ideas, to explain the diſtinction between primary and ſecondary qualities, and by that means, as I think, perplexed and darkened it.

When Philoſophers ſpeak about ideas, we are often at a loſs to know what they mean by them, and may be apt to ſuſpect that they are mere fictions, that have no exiſtence. They have told us, that, by the ideas which we have immediately from our ſenſes, they mean our ſenſations. Theſe,

Theſe, indeed, are real things, and not fictions. We may, by accurate attention to them, know perfectly their nature; and if Philoſophers would keep by this meaning of the word *idea*, when applied to the objects of ſenſe, they would at leaſt be more intelligible. Let us hear how Mr LOCKE explains the nature of thoſe ideas, when applied to primary and ſecondary qualities, Book 2. chap. 8. ſect. 7. 10th edition. "To diſ-"cover the nature of our ideas the better, and "to diſcourſe of them intelligibly, it will be con-"venient to diſtinguiſh them, as they are ideas, "or perceptions in our minds, and as they are "modifications of matter in the bodies that cauſe "ſuch perceptions in us, that ſo we may not "think (as perhaps uſually is done), that they "are exactly the images and reſemblances of "ſomething inherent in the ſubject; moſt of "thoſe of ſenſation being, in the mind, no more "the likeneſs of ſomething exiſting without us, "than the names that ſtand for them are the "likeneſs of our ideas, which yet, upon hearing, "they are apt to excite in us."

This way of diſtinguiſhing a thing, *firſt*, as what it is; and, *ſecondly*, as what it is not, is, I apprehend, a very extraordinary way of diſcovering its nature: And if ideas are ideas or perceptions in our minds, and at the ſame time the modifications of matter in the bodies that cauſe ſuch

ſuch perceptions in us, it will be no eaſy matter to diſcourſe of them intelligibly.

The diſcovery of the nature of ideas is carried on in the next ſection, in a manner no leſs extraordinary. "Whatſoever the mind perceives "in itſelf, or is the immediate object of percep- "tion, thought, or underſtanding, that I call "*idea*; and the power to produce any idea in "our mind, I call *quality* of the ſubject where- "in that power is. Thus, a ſnowball having the "power to produce in us the ideas of white, "cold, and round, the powers to produce thoſe "ideas in us, as they are in the ſnowball, I call "*qualities*; and as they are ſenſations, or per- "ceptions in our underſtandings, I call them "*ideas*; which ideas, if I ſpeak of them ſome- "times as in the things themſelves, I would be "underſtood to mean thoſe qualities in the ob- "jects which produce them in us."

Theſe are the diſtinctions which Mr Locke thought convenient, in order to diſcover the nature of our ideas of the qualities of matter the better, and to diſcourſe of them intelligibly. I believe it will be difficult to find two other paragraphs in the Eſſay ſo unintelligible. Whether this is to be imputed to the intractable nature of ideas, or to an oſcitancy of the author, with which he is very rarely chargeable, I leave the reader to judge. There are, indeed, ſeveral other paſſages in the ſame chapter, in which a like

like obſcurity appears; but I do not chooſe to dwell upon them. The concluſion drawn by him from the whole, is, that primary and ſecondary qualities are diſtinguiſhed by this, that the ideas of the former are reſemblances or copies of them; but the ideas of the other are not reſemblances of them. Upon this doctrine, I beg leave to make two obſervations.

Firſt, Taking it for granted, that, by the ideas of primary and ſecondary qualities, he means the ſenſations they excite in us, I obſerve that it appears ſtrange, that a ſenſation ſhould be the idea of a quality in body, to which it is acknowledged to bear no reſemblance. If the ſenſation of ſound be the idea of that vibration of the ſounding body which occaſions it, a ſurfeit may, for the ſame reaſon, be the idea of a feaſt.

A *ſecond* obſervation is, That when Mr LOCKE affirms, that the ideas of primary qualities, that is, the ſenſations they raiſe in us, are reſemblances of thoſe qualities, he ſeems neither to have given due attention to thoſe ſenſations, nor to the nature of ſenſation in general.

Let a man preſs his hand againſt a hard body, and let him attend to the ſenſation he feels, excluding from his thought every thing external, even the body that is the cauſe of his feeling. This abſtraction indeed is difficult, and ſeems to have been little, if at all, practiſed: But it is not impoſſible, and it is evidently the only way to

to underſtand the nature of the ſenſation. A due attention to this ſenſation will ſatisfy him, that it is no more like hardneſs in a body, than the ſenſation of ſound is like vibration in the ſounding body.

I know of no ideas but my conceptions; and my idea of hardneſs in a body, is the conception of ſuch a coheſion of its parts as requires great force to diſplace them. I have both the conception and belief of this quality in the body, at the ſame time that I have the ſenſation of pain, by preſſing my hand againſt it. The ſenſation and perception are cloſely conjoined by my conſtitution; but I am ſure they have no ſimilitude: I know no reaſon why the one ſhould be called the idea of the other, which does not lead us to call every natural effect the idea of its cauſe.

Neither did Mr LOCKE give due attention to the nature of ſenſation in general, when he affirmed, that the ideas of primary qualities, that is, the ſenſations excited by them, are reſemblances of thoſe qualities.

That there can be nothing like ſenſation in an inſentient being, or like thought in an unthinking being, is ſelf-evident, and has been ſhown, to the conviction of all men that think, by Biſhop BERKELEY; yet this was unknown to Mr LOCKE. It is an humbling conſideration, that, in ſubjects of this kind, ſelf-evident truths may be hid from the eyes of the moſt ingenious men. But we have,

have, withal, this conſolation, that, when once diſcovered, they ſhine by their own light; and that light can no more be put out.

Upon the whole, Mr LOCKE, in making ſecondary qualities to be powers in bodies to excite certain ſenſations in us, has given a juſt and diſtinct analyſis of what our ſenſes diſcover concerning them; but, in applying the theory of ideas to them, and to the primary qualities, he has been led to ſay things that darken the ſubject, and that will not bear examination.

Biſhop BERKELEY having adopted the ſentiments common to Philoſophers, concerning the ideas we have by our ſenſes, to wit, that they are all ſenſations, ſaw more clearly the neceſſary conſequence of this doctrine; which is, that there is no material world; no qualities primary or ſecondary; and, conſequently, no foundation for any diſtinction between them. He expoſed the abſurdity of a reſemblance between our ſenſations and any quality, primary or ſecondary, of a ſubſtance that is ſuppoſed to be inſentient. Indeed, if it is granted that the ſenſes have no other office but to furniſh us with ſenſations, it will be found impoſſible to make any diſtinction between primary and ſecondary qualities, or even to maintain the exiſtence of a material world.

From the account I have given of the various revolutions in the opinions of Philoſophers about primary and ſecondary qualities, I think it appears,

pears, that all the darkneſs and intricacy that thinking men have found in this ſubject, and the errors they have fallen into, have been owing to the difficulty of diſtinguiſhing clearly ſenſation from perception; what we feel from what we perceive.

The external ſenſes have a double province; to make us feel, and to make us perceive. They furniſh us with a variety of ſenſations, ſome pleaſant, others painful, and others indifferent; at the ſame time they give us a conception, and an invincible belief of the exiſtence of external objects. This conception of external objects is the work of Nature. The belief of their exiſtence, which our ſenſes give, is the work of Nature; ſo likewiſe is the ſenſation that accompanies it. This conception and belief which Nature produces by means of the ſenſes, we call *perception*. The feeling which goes along with the perception, we call *ſenſation*. The perception and its correſponding ſenſation are produced at the ſame time. In our experience we never find them disjoined. Hence we are led to conſider them as one thing, to give them one name, and to confound their different attributes. It becomes very difficult to ſeparate them in thought, to attend to each by itſelf, and to attribute nothing to it which belongs to the other.

To do this requires a degree of attention to what paſſes in our own minds, and a talent of diſtinguiſhing things that differ, which is not to be expected in the vulgar, and is even rarely found in Philoſophers; ſo that the progreſs made in a juſt analyſis of the operations of our ſenſes has been very ſlow. The hypotheſis of ideas, ſo generally adopted, hath, as I apprehend, greatly retarded this progreſs; and we might hope for a quicker advance, if Philoſophers could ſo far humble themſelves as to believe, that in every branch of the philoſophy of Nature, the productions of human fancy and conjecture will be found to be droſs; and that the only pure metal that will endure the teſt, is what is diſcovered by patient obſervation, and chaſte induction.

CHAP. XVIII.

Of other Objects of Perception.

BESIDES primary and ſecondary qualities of bodies, there are many other immediate objects of perception. Without pretending to a complete enumeration, I think they moſtly fall under one or other of the following claſſes. 1*ſt*, Certain ſtates or conditions of our own bodies. 2*d*, Mechanical powers or forces. 3*d*, Chemical

cal powers. *4th*, Medical powers or virtues. *5th*, Vegetable and animal powers.

That we perceive certain diſorders in our own bodies by means of uneaſy ſenſations, which nature hath conjoined with them, will not be diſputed. Of this kind are toothach, headach, gout, and every diſtemper and hurt which we feel. The notions which our ſenſe gives of theſe, have a ſtrong analogy to our notions of ſecondary qualities. Both are ſimilarly compounded, and may be ſimilarly reſolved, and they give light to each other.

In the toothach, for inſtance, there is, *firſt*, a painful feeling; and, *ſecondly*, a conception and belief of ſome diſorder in the tooth, which is believed to be the cauſe of the uneaſy feeling. The firſt of theſe is a ſenſation, the ſecond is perception; for it includes a conception and belief of an external object. But theſe two things, though of different natures, are ſo conſtantly conjoined in our experience, and in our imagination, that we conſider them as one. We give the ſame name to both; for the toothach is the proper name of the pain we feel; and it is the proper name of the diſorder in the tooth which cauſes that pain. If it ſhould be made a queſtion, whether the toothach be in the mind that feels it, or in the tooth that is affected? much might be ſaid on both ſides, while it is not obſerved that the word has two meanings. But a

little reflection ſatisfies us, that the pain is in the mind, and the diſorder in the tooth. If ſome Philoſopher ſhould pretend to have made a diſcovery, that the toothach, the gout, the headach, are only ſenſations in the mind, and that it is a vulgar error to conceive that they are diſtempers of the body, he might defend his ſyſtem in the ſame manner as thoſe, who affirm that there is no ſound nor colour nor taſte in bodies, defend that paradox. But both theſe ſyſtems, like moſt paradoxes, will be found to be only an abuſe of words.

We ſay that we *feel* the toothach, not that we perceive it. On the other hand, we ſay that we *perceive* the colour of a body, not that we feel it. Can any reaſon be given for this difference of phraſeology? In anſwer to this queſtion, I apprehend, that both when we feel the toothach, and when we ſee a coloured body, there is ſenſation and perception conjoined. But, in the toothach, the ſenſation being very painful, engroſſes the attention; and therefore we ſpeak of it, as if it were felt only, and not perceived: Whereas, in ſeeing a coloured body, the ſenſation is indifferent, and draws no attention. The quality in the body, which we call its colour, is the only object of attention; and therefore we ſpeak of it, as if it were perceived, and not felt. Though all Philoſophers agree that in ſeeing colour there is ſenſation, it is not eaſy to perſuade the

the vulgar, that, in ſeeing a coloured body, when the light is not too ſtrong, nor the eye inflamed, they have any ſenſation or feeling at all.

There are ſome ſenſations, which, though they are very often felt, are never attended to, nor reflected upon. We have no conception of them; and therefore, in language, there is neither any name for them, nor any form of ſpeech that ſuppoſes their exiſtence. Such are the ſenſations of colour, and of all primary qualities; and therefore thoſe qualities are ſaid to be perceived, but not to be felt. Taſte and ſmell, and heat and cold, have ſenſations that are often agreeable or diſagreeable, in ſuch a degree as to draw our attention; and they are ſometimes ſaid to be felt, and ſometimes to be perceived. When diſorders of the body occaſion very acute pain, the uneaſy ſenſation engroſſes the attention, and they are ſaid to be felt, not to be perceived.

There is another queſtion relating to phraſeology, which this ſubject ſuggeſts. A man ſays, he feels pain in ſuch a particular part of his body; in his toe, for inſtance. Now, reaſon aſſures us, that pain being a ſenſation, can only be in the ſentient being, as its ſubject, that is, in the mind. And though Philoſophers have diſputed much about the place of the mind; yet none of them ever placed it in the toe. What ſhall we ſay then in this caſe? do our ſenſes really deceive us, and make us believe a thing which our reaſon

determines to be impoſſible? I anſwer, *firſt*, That, when a man ſays he has pain in his toe, he is perfectly underſtood, both by himſelf, and thoſe who hear him. This is all that he intends. He really feels what he and all men call a pain in the toe; and there is no deception in the matter. Whether therefore there be any impropriety in the phraſe or not, is of no conſequence in common life. It anſwers all the ends of ſpeech, both to the ſpeaker and the hearers.

In all languages, there are phraſes which have a diſtinct meaning; while, at the ſame time, there may be ſomething in the ſtructure of them that diſagrees with the analogy of grammar, or with the principles of philoſophy. And the reaſon is, becauſe language is not made either by Grammarians or Philoſophers. Thus we ſpeak of feeling pain, as if pain was ſomething diſtinct from the feeling of it. We ſpeak of a pain coming and going, and removing from one place to another. Such phraſes are meant by thoſe who uſe them in a ſenſe that is neither obſcure nor falſe. But the Philoſopher puts them into his alembic, reduces them to their firſt principles, draws out of them a ſenſe that was never meant, and ſo imagines that he has diſcovered an error of the vulgar.

I obſerve, *ſecondly*, That, when we conſider the ſenſation of pain by itſef, without any reſpect to its cauſe, we cannot ſay with propriety, that

that the toe is either the place, or the ſubject of it. But it ought to be remembred, that when we ſpeak of pain in the toe, the ſenſation is combined in our thought, with the cauſe of it, which really is in the toe. The cauſe and the effect are combined in one complex notion, and the ſame name ſerves for both. It is the buſineſs of the Philoſopher to analyſe this complex notion, and to give different names to its different ingredients. He gives the name of *pain* to the ſenſation only, and the name of *diſorder* to the unknown cauſe of it. Then it is evident that the diſorder only is in the toe, and that it would be an error to think that the pain is in it. But we ought not to aſcribe this error to the vulgar, who never made the diſtinction, and who under the name of pain comprehend both the ſenſation and its cauſe.

Caſes ſometimes happen, which give occaſion even to the vulgar to diſtinguiſh the painful ſenſation from the diſorder which is the cauſe of it. A man who has had his leg cut off, many years after, feels pain in a toe of that leg. The toe has now no exiſtence; and he perceives eaſily, that the toe can neither be the place, nor the ſubject of the pain which he feels; yet it is the ſame feeling he uſed to have from a hurt in the toe; and if he did not know that his leg was cut off, it would give him the ſame immediate conviction of ſome hurt or diſorder in the toe.

The ſame phænomenon may lead the Philoſopher, in all caſes, to diſtinguiſh ſenſation from perception. We ſay, that the man had a deceitful feeling, when he felt a pain in his toe after the leg was cut off; and we have a true meaning in ſaying ſo. But, if we will ſpeak accurately, our ſenſations cannot be deceitful; they muſt be what we feel them to be, and can be nothing elſe. Where then lies the deceit? I anſwer, it lies not in the ſenſation, which is real, but in the ſeeming perception he had of a diſorder in his toe. This perception, which Nature had conjoined with the ſenſation, was in this inſtance fallacious.

The ſame reaſoning may be applied to every phænomenon that can, with propriety, be called a deception of ſenſe. As when one, who has the jaundice, ſees a body yellow, which is really white; or when a man ſees an object double, becauſe his eyes are not both directed to it; in theſe, and other like caſes, the ſenſations we have are real, and the deception is only in the perception which Nature has annexed to them.

Nature has connected our perception of external objects with certain ſenſations. If the ſenſation is produced, the correſponding perception follows even when there is no object, and in the caſe is apt to deceive us. In like manner, Nature has connected our ſenſations with certain impreſſions that are made upon the nerves and brain: And, when the impreſſion is made,

made, from whatever cauſe, the correſponding ſenſation and perception immediately follows. Thus, in the man who feels pain in his toe after the leg is cut off, the nerve that went to the toe, part of which was cut off with the leg, had the ſame impreſſion made upon the remaining part, which, in the natural ſtate of his body, was cauſed by a hurt in the toe: And immediately this impreſſion is followed by the ſenſation and perception which Nature connected with it.

In like manner, if the ſame impreſſions, which are made at preſent upon my optic nerves by the objects before me, could be made in the dark, I apprehend that I ſhould have the ſame ſenſations, and ſee the ſame objects which I now ſee. The impreſſions and ſenſations would in ſuch a caſe be real, and the perception only fallacious.

Let us next conſider the notions which our ſenſes give us of thoſe attributes of bodes called *powers*. This is the more neceſſary, becauſe power ſeems to imply ſome activity; yet we conſider body as a dead inactive thing, which does not act, but may be acted upon.

Of the mechanical powers aſcribed to bodies, that which is called their *vis inſita*, or *inertia*, may firſt be conſidered. By this is meant, no more than that bodies never change their ſtate of themſelves, either from reſt to motion, or from motion to reſt, or from one degree of velocity, or one direction to another. In order to

produce any ſuch change, there muſt be ſome force impreſſed upon them; and the change produced is preciſely proportioned to the force impreſſed, and in the direction of that force.

That all bodies have this property, is a matter of fact, which we learn from daily obſervation, as well as from the moſt accurate experiments. Now it ſeems plain, that this does not imply any activity in body, but rather the contrary. A power in body to change its ſtate, would much rather imply activity than its continuing in the ſame ſtate: So that, although this property of bodies is called their *vis inſita*, or *vis inertiæ*, it implies no proper activity.

If we conſider, next, the power of gravity, it is a fact, that all the bodies of our planetary ſyſtem gravitate towards each other. This has been fully proved by the great NEWTON. But this gravitation is not conceived by that Philoſopher to be a power inherent in bodies, which they exert of themſelves, but a force impreſſed upon them, to which they muſt neceſſarily yield. Whether this force be impreſſed by ſome ſubtile æther, or whether it be impreſſed by the power of the Supreme Being, or of ſome ſubordinate ſpiritual being, we do not know; but all ſound natural philoſophy, particularly that of NEWTON, ſuppoſes it to be an impreſſed force, and not inherent in bodies.

So

So that, when bodies gravitate, they do not properly act, but are acted upon: They only yield to an impreſſion that is made upon them. It is common in language to expreſs, by active verbs, many changes in things, wherein they are merely paſſive: And this way of ſpeaking is uſed chiefly when the cauſe of the change is not obvious to ſenſe. Thus we ſay that a ſhip ſails, when every man of common ſenſe knows that ſhe has no inherent power of motion, and is only driven by wind and tide. In like manner, when we ſay that the planets gravitate towards the ſun, we mean no more, but that, by ſome unknown power, they are drawn or impelled in that direction.

What has been ſaid of the power of gravitation may be applied to other mechanical powers, ſuch as cohefion, magnetiſm, electricity; and no leſs to chemical and medical powers. By all theſe, certain effects are produced, upon the application of one body to another. Our ſenſes diſcover the effect; but the power is latent. We know there muſt be a cauſe of the effect, and we form a relative notion of it from its effect; and very often the ſame name is uſed to ſignify the unknown cauſe, and the known effect.

We aſcribe to vegetables, the powers of drawing nouriſhment, growing and multiplying their kind. Here likewiſe the effect is manifeſt, but the

the cauſe is latent to ſenſe. Theſe powers, therefore, as well as all the other powers we aſcribe to bodies, are unknown cauſes, of certain known effects. It is the buſineſs of philoſophy to inveſtigate the nature of thoſe powers as far as we are able, but our ſenſes leave us in the dark.

We may obſerve a great ſimilarity in the notions which our ſenſes give us of ſecondary qualities, of the diſorders we feel in our own bodies, and of the various powers of bodies which we have enumerated. They are all obſcure and relative notions, being a conception, of ſome unknown cauſe of a known effect. Their names are, for the moſt part, common to the effect, and to its cauſe; and they are a proper ſubject of philoſophical diſquiſition. They might therefore, I think, not improperly, be called *occult* qualities.

This name, indeed, is fallen into diſgrace ſince the time of DES CARTES. It is ſaid to have been uſed by the Peripatetics to cloke their ignorance, and to ſtop all inquiry into the nature of thoſe qualities called *occult*. Be it ſo. Let thoſe anſwer for this abuſe of the word who were guilty of it. To call a thing occult, if we attend to the meaning of the word, is rather modeſtly to confeſs ignorance than to cloke it. It is to point it out as a proper ſubject for the inveſtigation of Philoſophers, whoſe proper buſi-

neſs

neſs it is to better the condition of humanity, by diſcovering what was before hid from human knowledge.

Were I therefore to make a diviſion of the qualities of bodies as they appear to our ſenſes, I would divide them firſt into thoſe that are *manifeſt*, and thoſe that are *occult*. The manifeſt qualities are thoſe which Mr LOCKE calls *primary*; ſuch as extenſion, figure, diviſibility, motion, hardneſs, ſoftneſs, fluidity. The nature of theſe is manifeſt even to ſenſe; and the buſineſs of the Philoſopher with regard to them, is not to find out their nature, which is well known, but to diſcover the effects produced by their various combinations; and with regard to thoſe of them which are not eſſential to matter, to diſcover their cauſes as far as he is able.

The ſecond claſs conſiſts of occult qualities, which may be ſubdivided into various kinds; as *firſt*, the ſecondary qualities; *ſecondly*, the diſorders we feel in our own bodies; and, *thirdly*, all the qualities which we call powers of bodies, whether mechanical, chemical, medical, animal or vegetable; or if there be any other powers not comprehended under theſe heads. Of all theſe the exiſtence is manifeſt to ſenſe, but the nature is occult; and here the Philoſopher has an ample field.

What is neceſſary for the conduct of our animal life, the bountiful Author of Nature hath made

made manifeſt to all men. But there are many other choice ſecrets of Nature, the diſcovery of which enlarges the power, and exalts the ſtate of man. Theſe are left to be diſcovered by the proper uſe of our rational powers. They are hid, not that they may be always concealed from human knowledge, but that we may be excited to ſearch for them. This is the proper buſineſs of a Philoſopher, and it is the glory of a man, and the beſt reward of his labour, to diſcover what Nature has thus concealed.

CHAP. XIX.

Of Matter and of Space.

THE objects of ſenſe we have hitherto conſidered are qualities. But qualities muſt have a ſubject. We give the names of *matter*, *material ſubſtance*, and *body*, to the ſubject of ſenſible qualities; and it may be aſked, what this *matter* is?

I perceive in a billiard ball, figure, colour, and motion; but the ball is not figure, nor is it colour, nor motion, nor all theſe taken together; it is ſomething that has figure, and colour, and motion. This is a dictate of Nature, and the belief of all mankind.

As to the nature of this ſomething, I am afraid we can give little account of it, but that it

it has the qualities which our ſenſes diſcover.

But how do we know that they are qualities, and cannot exiſt without a ſubject? I confeſs I cannot explain how we know that they cannot exiſt without a ſubject, any more than I can explain how we know that they exiſt. We have the information of nature for their exiſtence; and I think we have the information of nature that they are qualities.

The belief that figure, motion, and colour, are qualities, and require a ſubject, muſt either be a judgment of nature, or it muſt be diſcovered by reaſon, or it muſt be a prejudice that has no juſt foundation. There are Philoſophers who maintain, that it is a mere prejudice; that a body is nothing but a collection of what we call ſenſible qualities; and that they neither have nor need any ſubject. This is the opinion of Biſhop BERKELEY and Mr HUME; and they were led to it by finding, that they had not in their minds any idea of ſubſtance. It could neither be an idea of ſenſation nor of reflection.

But to me nothing ſeems more abſurd, than that there ſhould be extenſion without any thing extended; or motion without any thing moved; yet I cannot give reaſons for my opinion, becauſe it ſeems to me ſelf-evident, and an immediate dictate of my nature.

And that it is the belief of all mankind, appears in the ſtructure of all languages; in which we

we find adjective nouns uſed to expreſs ſenſible qualities. It is well known that every adjective in language muſt belong to ſome ſubſtantive expreſſed or underſtood; that is, every quality muſt belong to ſome ſubject.

Senſible qualities make ſo great a part of the furniture of our minds, their kinds are ſo many, and their number ſo great, that if prejudice, and not nature, teach us to aſcribe them all to a ſubject, it muſt have a great work to perform, which cannot be accompliſhed in a ſhort time, nor carried on to the ſame pitch in every individual. We ſhould find not individuals only, but nations and ages, differing from each other in the progreſs which this prejudice had made in their ſentiments; but we find no ſuch difference among men. What one man accounts a quality, all men do, and ever did.

It ſeems therefore to be a judgment of nature, that the things immediately perceived are qualities, which muſt belong to a ſubject; and all the information that our ſenſes give us about this ſubject, is, that it is that to which ſuch qualities belong. From this it is evident, that our notion of body or matter, as diſtinguiſhed from its qualities, is a relative notion; and I am afraid it muſt always be obſcure until men have other faculties.

The Philoſopher in this ſeems to have no advantage above the vulgar; for as they perceive colour,

colour, and figure, and motion by their ſenſes as well as he does, and both are equally certain that there is a ſubject of thoſe qualities, ſo the notions which both have of this ſubject are equally obſcure. When the Philoſopher calls it a *ſubſtratum*, and a ſubject of inheſion, thoſe learned words convey no meaning but what every man underſtands and expreſſes, by ſaying in common language, that it is a thing extended, and ſolid, and moveable.

The relation which ſenſible qualities bear to their ſubject, that is, to body, is not, however, ſo dark, but that it is eaſily diſtinguiſhed from all other relations. Every man can diſtinguiſh it from the relation of an effect to its cauſe; of a mean to its end; or of a ſign to the thing ſignified by it.

I think it requires ſome ripeneſs of underſtanding to diſtinguiſh the qualities of a body from the body. Perhaps this diſtinction is not made by brutes, nor by infants; and if any one thinks that this diſtinction is not made by our ſenſes, but by ſome other power of the mind, I will not diſpute this point, provided it be granted, that men, when their faculties are ripe, have a natural conviction, that ſenſible qualities cannot exiſt by themſelves without ſome ſubject to which they belong.

I think, indeed, that ſome of the determinations we form concerning matter cannot be de-

duced

duced ſolely from the teſtimony of ſenſe, but muſt be referred to ſome other ſource.

There ſeems to be nothing more evident, than that all bodies muſt conſiſt of parts; and that every part of a body is a body, and a diſtinct being which may exiſt without the other parts; and yet I apprehend this concluſion is not deduced ſolely from the teſtimony of ſenſe: For, beſides that it is a neceſſary truth, and therefore no object of ſenſe, there is a limit beyond which we cannot perceive any diviſion of a body. The parts become too ſmall to be perceived by our ſenſes; but we cannot believe that it becomes then incapable of being further divided, or that ſuch diviſion would make it not to be a body.

We carry on the diviſion and ſubdiviſion in our thought far beyond the reach of our ſenſes, and we can find no end to it: Nay, I think we plainly diſcern, that there can be no limit beyond which the diviſion cannot be carried.

For if there be any limit to this diviſion, one of two things muſt neceſſarily happen. Either we have come by diviſion to a body, which is extended, but has no parts, and is abſolutely indiviſible; or this body is diviſible, but as ſoon as it is divided, it becomes no body. Both theſe poſitions ſeem to me abſurd, and one or the other is the neceſſary conſequence of ſuppoſing a limit to the diviſibility of matter.

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On the other hand, if it is admitted that the diviſibility of matter has no limit, it will follow, that no body can be called one individual ſubſtance. You may as well call it two, or twenty, or two hundred. For when it is divided into parts, every part is a being or ſubſtance diſtinct from all the other parts, and was ſo even before the diviſion: Any one part may continue to exiſt, though all the other parts were annihilated.

There is, indeed, a principle long received, as an axiom in metaphyſics, which I cannot reconcile to the diviſibility of matter. It is, That every being is one, *omne ens eſt unum*. By which, I ſuppoſe, is meant, that every thing that exiſts muſt either be one indiviſible being, or compoſed of a determinate number of indiviſible beings. Thus an army may be divided into regiments, a regiment into companies, and a company into men. But here the diviſion has its limit; for you cannot divide a man without deſtroying him, becauſe he is an individual; and every thing, according to this axiom, muſt be an individual, or made up of individuals.

That this axiom will hold with regard to an army, and with regard to many other things, muſt be granted: But I require the evidence of its being applicable to all beings whatſoever.

Leibnitz, conceiving that all beings muſt have this metaphyſical unity, was by this led to

maintain, that matter, and indeed the whole univerſe, is made up of monades, that is, ſimple and indiviſible ſubſtances.

Perhaps the ſame apprehenſion might lead BOSCOVICH into his hypotheſis, which ſeems much more ingenious; to wit, that matter is compoſed of a definite number of mathematical points, endowed with certain powers of attraction and repulſion.

The diviſibility of matter without any limit, ſeems to me more tenable than either of theſe hypotheſes; nor do I lay much ſtreſs upon the metaphyſical axiom, conſidering its origin. Metaphyſicians thought proper to make the attributes common to all beings the ſubject of a ſcience. It muſt be a matter of ſome difficulty to find out ſuch attributes: And, after racking their invention, they have ſpecified three, to wit, unity, verity, and goodneſs; and theſe, I ſuppoſe, have been invented to a make a number, rather than from any clear evidence of their being univerſal.

There are other determinations concerning matter, which, I think, are not ſolely founded upon the teſtimony of ſenſe: Such as, that it is impoſſible that two bodies ſhould occupy the ſame place at the ſame time; or that the ſame body ſhould be in different places at the ſame time; or that a body can be moved from one place to another, without paſſing through the intermediate

intermediate places, either in a ſtraight courſe, or by ſome circuit. Theſe appear to be neceſſary truths, and therefore cannot be concluſions of our ſenſes; for our ſenſes teſtify only what is, and not what muſt neceſſarily be.

We are next to conſider our notion of ſpace. It may be obſerved, that although ſpace be not perceived by any of our ſenſes when all matter is removed; yet, when we perceive any of the primary qualities, ſpace preſents itſelf as a neceſſary concomitant: For there can neither be extenſion, nor motion, nor figure, nor diviſion, nor coheſion of parts without ſpace.

There are only two of our ſenſes by which the notion of ſpace enters into the mind; to wit, touch and ſight. If we ſuppoſe a man to have neither of theſe ſenſes, I do not ſee how he could ever have any conception of ſpace. Suppoſing him to have both, until he ſees or feels other objects, he can have no notion of ſpace: It has neither colour nor figure to make it an object of ſight: It has no tangible quality to make it an object of touch. But other objects of ſight and touch carry the notion of ſpace along with them; and not the notion only, but the belief of it: For a body could not exiſt if there was no ſpace to contain it: It could not move if there was no ſpace: Its ſituation, its diſtance, and every relation it has to other bodies, ſuppoſe ſpace.

But though the notion of ſpace ſeems not to enter at firſt into the mind, until it is introduced by the proper objects of ſenſe; yet, being once introduced, it remains in our conception and belief, though the objects which introduced it be removed. We ſee no abſurdity in ſuppoſing a body to be annihilated; but the ſpace that contained it remains; and to ſuppoſe that annihilated, ſeems to be abſurd. It is ſo much allied to nothing or emptineſs, that it ſeems incapable of annihilation or of creation.

Space not only retains a firm hold of our belief, even when we ſuppoſe all the objects that introduced it to be annihilated, but it ſwells to immenſity. We can ſet no limits to it, either of extent or of duration. Hence we call it immenſe, eternal, immoveable, and indeſtructible. But it is only an immenſe, eternal, immoveable, and indeſtructible void or emptineſs. Perhaps we may apply to it what the Peripatetics ſaid of their firſt matter, that whatever it is, it is potentially only, not actually.

When we conſider parts of ſpace that have meaſure and figure, there is nothing we underſtand better, nothing about which we can reaſon ſo clearly, and to ſo great extent. Extenſion and figure are circumſcribed parts of ſpace, and are the object of geometry, a ſcience in which human reaſon has the moſt ample field, and can go deeper, and with more certainty than in any other.

ether. But when we attempt to comprehend the whole of ſpace, and to trace it to its origin, we loſe ourſelves in the ſearch. The profound ſpeculations of ingenious men upon this ſubject differ ſo widely, as may lead us to ſuſpect, that the line of human underſtanding is too ſhort to reach the bottom of it.

Biſhop BERKELEY, I think, was the firſt who obſerved, that the extenſion, figure, and ſpace, of which we ſpeak in common language, and of which geometry treats, are originally perceived by the ſenſe of touch only; but that there is a notion of extenſion, figure, and ſpace, which may be got by ſight, without any aid from touch. To diſtinguiſh theſe, he calls the firſt tangible extenſion, tangible figure, and tangible ſpace; the laſt he calls viſible.

As I think this diſtinction very important in the philoſophy of our ſenſes, I ſhall adopt the names uſed by the inventor to expreſs it; remembering what has been already obſerved, that ſpace, whether tangible or viſible, is not ſo properly an object of ſenſe, as a neceſſary concomitant of the objects both of ſight and touch.

The reader may likewiſe be pleaſed to attend to this, that when I uſe the names of tangible and viſible ſpace, I do not mean to adopt Biſhop BERKELEY's opinion, ſo far as to think that they are really different things, and altogether unlike. I take them to be different conceptions of the

ſame thing; the one very partial, and the other more complete; but both diſtinct and juſt, as far as they reach.

Thus when I ſee a ſpire at a very great diſtance, it ſeems like the point of a bodkin; there appears no vane at the top, no angles. But when I view the ſame object at a ſmall diſtance, I ſee a huge pyramid of ſeveral angles with a vane on the top. Neither of theſe appearances is fallacious. Each of them is what it ought to be, and what it muſt be, from ſuch an object ſeen at ſuch different diſtances. Theſe different appearances of the ſame object may ſerve to illuſtrate the different conceptions of ſpace, according as they are drawn from the information of ſight alone, or as they are drawn from the additional information of touch.

Our ſight alone, unaided by touch, gives a very partial notion of ſpace, but yet a diſtinct one. When it is conſidered, according to this partial notion, I call it viſible ſpace. The ſenſe of touch gives a much more complete notion of ſpace; and when it is conſidered according to this notion, I call it tangible ſpace. Perhaps there may be intelligent beings of a higher order, whoſe conceptions of ſpace are much more complete than thoſe we have from both ſenſes. Another ſenſe added to thoſe of ſight and touch, might, for what I know, give us conceptions of ſpace, as different from thoſe we can now

now attain, as tangible ſpace is from viſible; and might reſolve many knotty points concerning it, which, from the imperfection of our faculties, we cannot by any labour untie.

BERKELEY acknowledges that there is an exact correſpondence between the viſible figure and magnitude of objects, and the tangible; and that every modification of the one has a modification of the other correſponding. He acknowledges likewiſe, that Nature has eſtabliſhed ſuch a connection between the viſible figure and magnitude of an object, and the tangible, that we learn by experience to know the tangible figure and magnitude from the viſible. And having been accuſtomed to do ſo from infancy, we get the habit of doing it with ſuch facility and quickneſs, that we think we ſee tangible figure, magnitude, and diſtance of bodies, when, in reality, we only collect thoſe tangible qualities from the correſponding viſible qualities, which are natural ſigns of them.

The correſpondence and connection which BERKELEY ſhews to be between the viſible figure and magnitude of objects, and their tangible figure and magnitude, is in ſome reſpects very ſimilar to that which we have obſerved between our ſenſations, and the primary qualities with which they are connected. No ſooner is the ſenſation felt, than immediately we have the conception and belief of the correſponding qua-

lity. We give no attention to the ſenſation; it has not a name; and it is difficult to perſuade us that there was any ſuch thing.

In like manner, no ſooner is the viſible figure and magnitude of an object ſeen, than immediately we have the conception and belief of the correſponding tangible figure and magnitude. We give no attention to the viſible figure and magnitude. It is immediately forgot, as if it had never been perceived; and it has no name in common language; and indeed, until BERKELEY pointed it out as a ſubject of ſpeculation, and gave it a name, it had none among Philoſophers, excepting in one inſtance, relating to the heavenly bodies, which are beyond the reach of touch. With regard to them, what BERKELEY calls viſible magnitude, was, by Aſtronomers, called apparent magnitude.

There is ſurely an apparent magnitude, and an apparent figure of terreſtrial objects, as well as of celeſtial; and this is what BERKELEY calls their viſible figure and magnitude. But this was never made an object of thought among Philoſophers, until that author gave it a name, and obſerved the correſpondence and connection between it and tangible magnitude and figure, and how the mind gets the habit of paſſing ſo inſtantaneouſly from the viſible figure, as a ſign to the tangible figure, as the thing ſignified by it, that the firſt is perfectly forgot, as if it had never been perceived.

Viſible

Viſible figure, extenſion and ſpace, may be made a ſubject of mathematical ſpeculation, as well as the tangible. In the viſible, we find two dimenſions only; in the tangible three. In the one, magnitude is meaſured by angles; in the other by lines. Every part of viſible ſpace bears ſome proportion to the whole; but tangible ſpace being immenſe, any part of it bears no proportion to the whole.

Such differences in their properties led Biſhop BERKELEY to think, that viſible and tangible magnitude and figure, are things totally different and diſſimilar, and cannot both belong to the ſame object.

And upon this diſſimilitude is grounded one of the ſtrongeſt arguments by which his ſyſtem is ſupported. For it may be ſaid, if there be external objects which have a real extenſion and figure, it muſt be either tangible extenſion and figure, or viſible, or both. The laſt appears abſurd; nor was it ever maintained by any man, that the ſame object has two kinds of extenſion and figure, totally diſſimilar. There is then only one of the two really in the object; and the other muſt be ideal. But no reaſon can be aſſigned why the perceptions of one ſenſe ſhould be real, while thoſe of another are only ideal; and he who is perſuaded that the objects of ſight are ideas only, has equal reaſon to believe ſo of the objects of touch.

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This argument, however, loſes all its force, if it be true, as was formerly hinted, that viſible figure and extenſion are only a partial conception, and the tangible figure and extenſion a more complete conception of that figure and extenſion which is really in the object.

It has been proved very fully by Biſhop BERKELEY, that ſight alone, without any aid from the informations of touch, gives us no perception, nor even conception of the diſtance of any object from the eye. But he was not aware that this very principle overturns the argument for his ſyſtem, taken from the difference between viſible and tangible extenſion and figure: For, ſuppoſing external objects to exiſt, and to have that tangible extenſion and figure which we perceive, it follows demonſtrably, from the principle now mentioned, that their viſible extenſion and figure muſt be juſt what we ſee it to be.

The rules of perſpective, and of the projection of the ſphere, which is a branch of perſpective, are demonſtrable. They ſuppoſe the exiſtence of external objects, which have a tangible extenſion and figure; and, upon that ſuppoſition, they demonſtrate what muſt be the viſible extenſion and figure of ſuch objects, when placed in ſuch a poſition, and at ſuch a diſtance.

Hence it is evident, that the viſible figure and extenſion of objects is ſo far from being incompatible with the tangible, that the firſt is a neceſſary

ceſſary conſequence from the laſt, in beings that ſee as we do. The correſpondence between them is not arbitrary, like that between words and the thing they ſignify, as BERKELEY thought; but it reſults neceſſarily from the nature of the two ſenſes; and this correſpondence being always found in experience to be exactly what the rules of perſpective ſhow that it ought to be if the ſenſes give true information, is an argument of the truth of both.

CHAP. XX.

Of the Evidence of Senſe, and of Belief in general.

THE intention of Nature in the powers which we call the external ſenſes, is evident. They are intended to give us that information of external objects which the Supreme Being ſaw to be proper for us in our preſent ſtate; and they give to all mankind the information neceſſary for life, without reaſoning, without any art or inveſtigation on our part.

The moſt uninſtructed peaſant has as diſtinct a conception, and as firm a belief of the immediate objects of his ſenſes, as the greateſt Philoſopher; and with this he reſts ſatisfied, giving himſelf no concern how he came by this conception and belief. But the Philoſopher is impatient

tient to know how his conception of external objects, and his belief of their exiſtence, is produced. This, I am afraid, is hid in impenetrable darkneſs. But where there is no knowledge, there is the more room for conjecture; and of this Philoſophers have always been very liberal.

The dark cave and ſhadows of PLATO, the ſpecies of ARISTOTLE, the films of EPICURUS, and the ideas and impreſſions of modern Philoſophers, are the productions of human fancy, ſucceſſively invented to ſatisfy the eager deſire of knowing how we perceive external objects; but they are all deficient in the two eſſential characters of a true and philoſophical account of the phænomenon: For we neither have any evidence of their exiſtence, nor, if they did exiſt, can it be ſhewn how they would produce perception.

It was before obſerved, that there are two ingredients in this operation of perception: *Firſt*, The conception or notion of the object; and, *ſecondly*, The belief of its preſent exiſtence; both are unaccountable.

That we can aſſign no adequate cauſe of our firſt conceptions of things, I think, is now acknowledged by the moſt enlightened Philoſophers. We know that ſuch is our conſtitution, that in certain circumſtances we have certain conceptions; but how they are produced, we know

know no more than how we ourſelves were produced.

When we have got the conception of external objects by our ſenſes, we can analyſe them in our thought into their ſimple ingredients; and we can compound thoſe ingredients into various new forms, which the ſenſes never preſented. But it is beyond the power of human imagination to form any conception, whoſe ſimple ingredients have not been furniſhed by Nature in a manner unaccountable to our underſtanding.

We have an immediate conception of the operations of our own minds, joined with a belief of their exiſtence; and this we call conſciouſneſs. But this is only giving a name to this ſource of our knowledge. It is not a diſcovery of its cauſe. In like manner, we have, by our external ſenſes, a conception of external objects, joined with a belief of their exiſtence; and this we call perception. But this is only giving a name to another ſource of our knowledge, without diſcovering its cauſe.

We know, that when certain impreſſions are made upon our organs, nerves, and brain, certain correſponding ſenſations are felt, and certain objects are both conceived and believed to exiſt. But in this train of operations Nature works in the dark. We can neither diſcover the cauſe of any one of them, nor any neceſſary connection of one with another: And whether they are connected

nected by any neceſſary tie, or only conjoined in our conſtitution by the will of Heaven, we know not.

That any kind of impreſſion upon a body ſhould be the efficient cauſe of ſenſation, appears very abſurd. Nor can we perceive any neceſſary connection between ſenſation and the conception and belief of an external object. For any thing we can diſcover, we might have been ſo framed as to have all the ſenſations we now have by our ſenſes, without any impreſſions upon our organs, and without any conception of any external object. For any thing we know, we might have been ſo made as to perceive external objects, without any impreſſions on bodily organs, and without any of thoſe ſenſations which invariably accompany perception in our preſent frame.

If our conception of external objects be unaccountable, the conviction and belief of their exiſtence, which we get by our ſenſes, is no leſs ſo.

Belief, aſſent, conviction, are words which I think do not admit of logical definition, becauſe the operation of mind ſignified by them is perfectly ſimple, and of its own kind. Nor do they need to be defined, becauſe they are common words, and well underſtood.

Belief muſt have an object. For he that believes, muſt believe ſomething; and that which he

he believes is called the object of his belief. Of this object of his belief, he muſt have ſome conception, clear or obſcure; for although there may be the moſt clear and diſtinct conception of an object without any belief of its exiſtence, there can be no belief without conception.

Belief is always expreſſed in language by a propoſition, wherein ſomething is affirmed or denied. This is the form of ſpeech which in all languages is appropriated to that purpoſe, and without belief there could be neither affimation nor denial, nor ſhould we have any form of words to expreſs either. Belief admits of all degrees from the ſlighteſt ſuſpicion to the fulleſt aſſurance. Theſe things are ſo evident to every man that reflects, that it would be abuſing the reader's patience to dwell upon them.

I proceed to obſerve, that there are many operations of mind in which, when we analyſe them as far as we are able, we find belief to be an eſſential ingredient. A man cannot be conſcious of his own thoughts, without believing that he thinks. He cannot perceive an object of ſenſe, without believing that it exiſts. He cannot diſtinctly remember a paſt event without believing that it did exiſt. Belief therefore is an ingredient in conſciouſneſs, in perception, and in remembrance.

Not only in moſt of our intellectual operations, but in many of the active principles of the

the human mind, belief enters as an ingredient. Joy and ſorrow, hope and fear, imply a belief of good or ill, either preſent or in expectation. Eſteem, gratitude, pity, and reſentment, imply a belief of certain qualities in their objects. In every action that is done for an end, there muſt be a belief of its tendency to that end. So large a ſhare has belief in our intellectual operations, in our active principles, and in our actions themſelves, that as faith in things divine is repreſented as the main ſpring in the life of a Chriſtian, ſo belief in general is the main ſpring in the life of a man.

That men often believe what there is no juſt ground to believe, and thereby are led into hurtful errors, is too evident to be denied: And, on the other hand, that there are juſt grounds of belief, can as little be doubted by any man who is not a perfect ſceptic.

We give the name of evidence to whatever is a ground of belief. To believe without evidence is a weakneſs which every man is concerned to avoid, and which every man wiſhes to avoid. Nor is it in a man's power to believe any thing longer than he thinks he has evidence.

What this evidence is, is more eaſily felt than deſcribed. Thoſe who never reflected upon its nature, feel its influence in governing their belief. It is the buſineſs of the Logician to explain its nature, and to diſtinguiſh its various kinds

kinds and degrees; but every man of underſtanding can judge of it, and commonly judges right, when the evidence is fairly laid before him, and his mind is free from prejudice. A man who knows nothing of the theory of viſion, may have a good eye; and a man who never ſpeculated about evidence in the abſtract, may have a good judgment.

The common occaſions of life lead us to diſtinguiſh evidence into different kinds, to which we give names that are well underſtood; ſuch as the evidence of ſenſe, the evidence of memory, the evidence of conſciouſneſs, the evidence of teſtimony, the evidence of axioms, the evidence of reaſoning: All men of common underſtanding agree, that each of theſe kinds of evidence may afford juſt ground of belief, and they agree very generally in the circumſtances that ſtrengthen or weaken them.

Philoſophers have endeavoured by analyſing the different ſorts of evidence, to find out ſome common nature wherein they all agree, and thereby to reduce them all to one. This was the aim of the ſchoolmen in their intricate diſputes about the criterion of truth. DES CARTES placed this criterion of truth in clear and diſtinct perception, and laid it down as a maxim, that whatever we clearly and diſtinctly perceive to be true, is true; but it is difficult to know what he underſtands by clear and diſtinct per-

perception in this maxim. Mr LOCKE placed it in a perception of the agreement or diſagreement of our ideas, which perception is immediate in intuitive knowledge, and by the intervention of other ideas in reaſoning.

I confeſs that, although I have, as I think, a diſtinct notion of the different kinds of evidence above mentioned, and perhaps of ſome others, which it is unneceſſary here to enumerate, yet I am not able to find any common nature to which they may all be reduced. They ſeem to me to agree only in this, that they are all fitted by Nature to produce belief in the human mind, ſome of them in the higheſt degree, which we call certainty, others in various degrees according to circumſtances.

I ſhall take it for granted, that the evidence of ſenſe, when the proper circumſtances concur, is good evidence, and a juſt ground of belief. My intention in this place is only to compare it with the other kinds that have been mentioned, that we may judge whether it be reducible to any of them, or of a nature peculiar to itſelf.

Firſt, It ſeems to be quite different from the evidence of reaſoning. All good evidence is commonly called reaſonable evidence, and very juſtly, becauſe it ought to govern our belief as reaſonable creatures. And, according to this meaning, I think the evidence of ſenſe no leſs reaſonable than that of demonſtration. If Nature

ture give us information of things that concern us, by other means than by reaſoning, reaſon itſelf will direct us to receive that information with thankfulneſs, and to make the beſt uſe of it.

But when we ſpeak of the evidence of reaſoning as a particular kind of evidence, it means the evidence of propoſitions that are inferred by reaſoning, from propoſitions already known and believed. Thus the evidence of the fifth propoſition of the firſt book of EUCLID's Elements conſiſts in this, That it is ſhown to be the neceſſary conſequence of the axioms, and of the preceding propoſitions. In all reaſoning, there muſt be one or more premiſes, and a concluſion drawn from them. And the premiſes are called the reaſon why we muſt believe the concluſion which we ſee to follow from them.

That the evidence of ſenſe is of a different kind, needs little proof. No man ſeeks a reaſon for believing what he ſees or feels; and if he did, it would be difficult to find one. But though he can give no reaſon for believing his ſenſes, his belief remains as firm as if it were grounded on demonſtration.

Many eminent Philoſophers thinking it unreaſonable to believe, when they could not ſhow a reaſon, have laboured to furniſh us with reaſons for believing our ſenſes; but their reaſons are very inſufficient, and will not bear examination. Other Philoſophers have ſhewen very

clearly the fallacy of theſe reaſons, and have, as they imagine, diſcovered invincible reaſons againſt this belief; but they have never been able either to ſhake it in themſelves, or to convince others. The ſtateſman continues to plod, the ſoldier to fight, and the merchant to export and import, without being in the leaſt moved by the demonſtrations that have been offered of the non-exiſtence of thoſe things about which they are ſo ſeriouſly employed. And a man may as ſoon, by reaſoning, pull the moon out of her orbit, as deſtroy the belief of the objects of ſenſe.

Shall we ſay then that the evidence of ſenſe is the ſame with that of axioms, or ſelf-evident truths? I anſwer, *firſt*, That all modern Philoſophers ſeem to agree, that the exiſtence of the objects of ſenſe is not ſelf-evident, becauſe ſome of them have endeavoured to prove it by ſubtile reaſoning, others to refute it. Neither of theſe can conſider it as ſelf-evident.

Secondly, I would obſerve, that the word *axiom* is taken by Philoſophers in ſuch a ſenſe, as that the exiſtence of the objects of ſenſe cannot, with propriety, be called an axiom. They give the name of axiom only to ſelf-evident truths that are neceſſary, and are not limited to time and place, but muſt be true at all times, and in all places. The truths atteſted by our ſenſes are not

not of this kind; they are contingent, and limited to time and place.

Thus, that one is the half of two, is an axiom. It is equally true at all times, and in all places. We perceive, by attending to the propoſition itſelf, that it cannot but be true; and therefore it is called an eternal, neceſſary and immutable truth. That there is at preſent a chair on my right hand, and another on my left, is a truth atteſted by my ſenſes; but it is not neceſſary, nor eternal, nor immutable. It may not be true next minute; and therefore, to call it an axiom, would, I apprehend, be to deviate from the common uſe of the word.

Thirdly, If the word axiom be put to ſignify every truth which is known immediately, without being deduced from any antecedent truth, then the exiſtence of the objects of ſenſe may be called an axiom. For my ſenſes give me as immediate conviction of what they teſtify, as my underſtanding gives me of what is commonly called an axiom.

There is no doubt an analogy between the evidence of ſenſe and the evidence of teſtimony. Hence we find in all languages the analogical expreſſions of the *teſtimony of ſenſe*, of giving *credit* to our ſenſes, and the like. But there is a real difference between the two, as well as a ſimilitude. In believing upon teſtimony, we rely upon the authority of a perſon who teſtifies;

But we have no ſuch authority for believing our ſenſes.

Shall we ſay then that this belief is the inſpiration of the Almighty? I think this may be ſaid in a good ſenſe; for I take it to be the immediate effect of our conſtitution, which is the work of the Almighty. But if inſpiration be underſtood to imply a perſuaſion of its coming from God, our belief of the objects of ſenſe is not inſpiration; for a man would believe his ſenſes though he had no notion of a Deity. He who is perſuaded that he is the workmanſhip of God, and that it is a part of his conſtitution to believe his ſenſes, may think that a good reaſon to confirm his belief: But he had the belief before he could give this or any other reaſon for it.

If we compare the evidence of ſenſe with that of memory, we find a great reſemblance, but ſtill ſome difference. I remember diſtinctly to have dined yeſterday with ſuch a company. What is the meaning of this? It is, that I have a diſtinct conception and firm belief of this paſt event; not by reaſoning, not by teſtimony, but immediately from my conſtitution: And I give the name of memory to that part of my conſtitution, by which I have this kind of conviction of paſt events.

I ſee a chair on my right hand. What is the meaning of this? It is, that I have, by my conſtitution,

ſtitution, a diſtinct conception and firm belief of the preſent exiſtence of the chair in ſuch a place, and in ſuch a poſition; and I give the name of ſeeing to that part of my conſtitution, by which I have this immediate conviction. The two operations agree in the immediate conviction which they give. They agree in this alſo, that the things believed are not neceſſary, but contingent, and limited to time and place. But they differ in two reſpects; *firſt*, That memory has ſomething for its object that did exiſt in time paſt; but the object of ſight, and of all the ſenſes, muſt be ſomething which exiſts at preſent. And, *ſecondly*, That I ſee by my eyes, and only when they are directed to the object, and when it is illuminated. But my memory is not limited by any bodily organ that I know, nor by light and darkneſs, though it has its limitations of another kind.

Theſe differences are obvious to all men, and very reaſonably lead them to conſider ſeeing and remembering as operations ſpecifically different. But the nature of the evidence they give has a great reſemblance. A like difference and a like reſemblance there is between the evidence of ſenſe and that of conſciouſneſs, which I leave the reader to trace.

As to the opinion, that evidence conſiſts in a perception of the agreement or diſagreement of

ideas, we may have occaſion to conſider it more particularly in another place. Here I only obſerve, that, when taken in the moſt favourable ſenſe, it may be applied with propriety to the evidence of reaſoning, and to the evidence of ſome axioms. But I cannot ſee how, in any ſenſe, it can be applied to the evidence of conſciouſneſs, to the evidence of memory, or to that of the ſenſes.

When I compare the different kinds of evidence above mentioned, I confeſs, after all, that the evidence of reaſoning, and that of ſome neceſſary and ſelf-evident truths, ſeems to be the leaſt myſterious, and the moſt perfectly comprehended; and therefore I do not think it ſtrange that Philoſophers ſhould have endeavoured to reduce all kinds of evidence to theſe.

When I ſee a propoſition to be ſelf-evident and neceſſary, and that the ſubject is plainly included in the predicate, there ſeems to be nothing more that I can deſire, in order to underſtand why I believe it. And when I ſee a conſequence that neceſſarily follows from one or more ſelf-evident propoſitions, I want nothing more with regard to my belief of that conſequence. The light of truth ſo fills my mind in theſe caſes, that I can neither conceive, nor deſire any thing more ſatisfying.

On the other hand, when I remember diſtinctly a paſt event, or ſee an object before my eyes, this

this commands my belief no leſs than an axiom. But when, as a Philoſopher, I reflect upon this belief, and want to trace it to its origin, I am not able to reſolve it into neceſſary and ſelf-evident axioms, or concluſions that are neceſſarily conſequent upon them. I ſeem to want that evidence which I can beſt comprehend, and which gives perfect ſatisfaction to an inquiſitive mind; yet it is ridiculous to doubt, and I find it is not in my power. An attempt to throw off this belief, is like an attempt to fly, equally ridiculous and impracticable.

To a Philoſopher, who has been accuſtomed to think that the treaſure of his knowledge is the acquiſition of that reaſoning power of which he boaſts, it is no doubt humiliating to find, that his reaſon can lay no claim to the greater part of it.

By his reaſon, he can diſcover certain abſtract and neceſſary relations of things: But his knowledge of what really exiſts, or did exiſt, comes by another channel, which is open to thoſe who cannot reaſon. He is led to it in the dark, and knows not how he came by it.

It is no wonder that the pride of philoſophy ſhould lead ſome to invent vain theories, in order to account for this knowledge; and others, who ſee this to be impracticable, to ſpurn at a knowledge they cannot account for, and vainly attempt to throw it off, as a reproach to their underſtanding.

underſtanding. But the wiſe and the humble will receive it as the gift of Heaven, and endeavour to make the beſt uſe of it.

CHAP. XXI.

Of the Improvement of the Senſes.

OUR ſenſes may be conſidered in two views; *firſt*, As they afford us agreeable ſenſations, or ſubject us to ſuch as are diſagreeable; and, *ſecondly*, As they give us information of things that concern us.

In the *firſt* view, they neither require nor admit of improvement. Both the painful and the agreeable ſenſations of our external ſenſes are given by nature for certain ends; and they are given in that degree which is the moſt proper for their end. By diminiſhing or increaſing them, we ſhould not mend, but mar the work of Nature.

Bodily pains are indications of ſome diſorder or hurt of the body, and admonitions to uſe the beſt means in our power to prevent or remove their cauſes. As far as this can be done by temperance, exerciſe, regimen, or the ſkill of the phyſician, every man hath ſufficient inducement to do it.

When

When pain cannot be prevented or removed, it is greatly alleviated by patience and fortitude of mind. While the mind is ſuperior to pain, the man is not unhappy, though he may be exerciſed. It leaves no ſting behind it, but rather matter of triumph and agreeable reflection, when borne properly, and in a good cauſe. The Canadians have taught us, that even ſavages may acquire a ſuperiority to the moſt excruciating pains; and, in every region of the earth, inſtances will be found, where a ſenſe of duty, of honour, or even of worldly intereſt, have triumphed over it.

It is evident, that Nature intended for man, in his preſent ſtate, a life of labour and toil, wherein he may be occaſionally expoſed to pain and danger: And the happieſt man is not he who has felt leaſt of thoſe evils, but he whoſe mind is fitted to bear them by real magnanimity.

Our active and perceptive powers are improved and perfected by uſe and exerciſe. This is the conſtitution of Nature. But, with regard to the agreeable and diſagreeable ſenſations we have by our ſenſes, the very contrary is an eſtabliſhed conſtitution of Nature: The frequent repetition of them weakens their force. Senſations at firſt very diſagreeable, by uſe become tolerable, and at laſt perfectly indifferent. And thoſe that are at firſt very agreeable, by frequent repetition

repetition become inſipid, and at laſt perhaps give diſguſt. Nature has ſet limits to the pleaſures of ſenſe, which we cannot paſs; and all ſtudied gratification of them, as it is mean and unworthy of a man, ſo it is fooliſh and fruitleſs.

The man who, in eating and drinking, and in other gratifications of ſenſe, obeys the calls of Nature, without affecting delicacies and refinements, has all the enjoyment that the ſenſes can afford. If one could, by a ſoft and luxurious life, acquire a more delicate ſenſibility to pleaſure, it muſt be at the expence of a like ſenſibility to pain, from which he can never promiſe exemption; and at the expence of cheriſhing many diſeaſes which produce pain.

The improvement of our external ſenſes, as they are the means of giving us information, is a ſubject more worthy of our attention: For although they are not the nobleſt and moſt exalted powers of our nature, yet they are not the leaſt uſeful. All that we know or can know of the material world, muſt be grounded upon their information; and the Philoſopher, as well as the day-labourer, muſt be indebted to them for the largeſt part of his knowledge.

Some of our perceptions by the ſenſes may be called original, becauſe they require no previous experience or learning; but the far greateſt part is acquired, and the fruit of experience.

Three

Three of our ſenſes, to wit, ſmell, taſte, and hearing, originally give us only certain ſenſations, and a conviction that theſe ſenſations are occaſioned by ſome external object. We give a name to that quality of the object by which it is fitted to produce ſuch a ſenſation, and connect that quality with the object, and with its other qualities.

Thus we learn, that a certain ſenſation of ſmell is produced by a roſe; and that quality in the roſe, by which it is fitted to produce this ſenſation, we call the ſmell of the roſe. Here it is evident that the ſenſation is original. The perception, that the roſe has that quality, which we call its ſmell, is acquired. In like manner, we learn all thoſe qualities in bodies, which we call their ſmell, their taſte, their ſound. Theſe are all ſecondary qualities, and we give the ſame name to them which we give to the ſenſations they produce; not from any ſimilitude between the ſenſation and the quality of the ſame name, but becauſe the quality is ſignified to us by the ſenſation as its ſign, and becauſe our ſenſes give us no other knowledge of the quality, but that it is fit to produce ſuch a ſenſation.

By the other two ſenſes, we have much more ample information. By ſight, we learn to diſtinguiſh objects by their colour, in the ſame manner as by their ſound, taſte, and ſmell. By this ſenſe, we perceive viſible objects to have extenſion

ception, but only in that which is acquired by cuſtom. The variation of colour, exhibited to the eye by the painter's art, is the ſame which Nature exhibits by the different degrees of light falling upon the convex ſurface of a ſphere.

In perception, whether original or acquired, there is ſomething which may be called the ſign, and ſomething which is ſignified to us, or brought to our knowledge by that ſign.

In original perception, the ſigns are the various ſenſations which are produced by the impreſſions made upon our organs. The things ſignified, are the objects perceived in conſequence of thoſe ſenſations, by the original conſtitution of our nature.

Thus, when I graſp an ivory ball in my hand, I have a certain ſenſation of touch. Although this ſenſation be in the mind, and have no ſimilitude to any thing material, yet, by the laws of my conſtitution, it is immediately followed by the conception and belief, that there is in my hand a hard ſmooth body of a ſpherical figure, and about an inch and a half in diameter. This belief is grounded neither upon reaſoning, nor upon experience; it is the immediate effect of my conſtitution, and this I call original perception.

In acquired perception, the ſign may be either a ſenſation, or ſomething originally perceived. The thing ſignified, is ſomething, which, by experience,

perience, has been found connected with that ſign.

Thus, when the ivory ball is placed before my eye, I perceive by ſight what I before perceived by touch, that the ball is ſmooth, ſpherical, of ſuch a diameter, and at ſuch a diſtance from the eye; and to this is added the perception of its colour. All theſe things I perceive by ſight diſtinctly, and with certainty: Yet it is certain from principles of philoſophy, that if I had not been accuſtomed to compare the informations of ſight with thoſe of touch, I ſhould not have perceived theſe things by ſight. I ſhould have perceived a circular object, having its colour gradually more faint towards the ſhaded ſide. But I ſhould not have perceived it to have three dimenſions, to be ſpherical, to be of ſuch a linear magnitude, and at ſuch a diſtance from the eye. That theſe laſt mentioned are not original perceptions of ſight, but acquired by experience, is ſufficiently evident from the principles of optics, and from the art of painters, in painting objects of three dimenſions, upon a plane which has only two. And it has been put beyond all doubt, by obſervations recorded of ſeveral perſons, who having, by cataracts in their eyes, been deprived of ſight from their infancy, have been couched and made to ſee, after they came to years of underſtanding.

Thoſe who have had their eyeſight from infancy, acquire ſuch perceptions ſo early, that they cannot recollect the time when they had them not, and therefore make no diſtinction between them and their original perceptions; nor can they be eaſily perſuaded, that there is any juſt foundation for ſuch a diſtinction. In all languages men ſpeak with equal aſſurance of their ſeeing objects to be ſpherical or cubical, as of their feeling them to be ſo; nor do they ever dream, that theſe perceptions of ſight were not as early and original as the perceptions they have of the ſame objects by touch.

This power which we acquire of perceiving things by our ſenſes, which originally we ſhould not have perceived, is not the effect of any reaſoning on our part: It is the reſult of our conſtitution, and of the ſituations in which we happen to be placed.

We are ſo made, that when two things are found to be conjoined in certain circumſtances, we are prone to believe that they are connected by nature, and will always be found together in like circumſtances. The belief which we are led into in ſuch caſes is not the effect of reaſoning, nor does it ariſe from intuitive evidence in the thing believed; it is, as I apprehend, the immediate effect of our conſtitution: Accordingly it is ſtrongeſt in infancy, before our reaſoning power appears, before we are capable of drawing

drawing a concluſion from premiſes. A child who has once burnt his finger in a candle, from that ſingle inſtance connects the pain of burning with putting his finger in the candle, and believes that theſe two things muſt go together. It is obvious, that this part of our conſtitution is of very great uſe before we come to the uſe of reaſon, and guards us from a thouſand miſchiefs, which, without it, we would ruſh into; it may ſometimes lead us into error, but the good effects of it far overbalance the ill.

It is, no doubt, the perfection of a rational being to have no belief but what is grounded on intuitive evidence, or on juſt reaſoning: But man, I apprehend, is not ſuch a being; nor is it the intention of Nature that he ſhould be ſuch a being, in every period of his exiſtence. We come into the world without the exerciſe of reaſon; we are merely animal before we are rational creatures; and it is neceſſary for our preſervation, that we ſhould believe many things before we can reaſon. How then is our belief to be regulated before we have reaſon to regulate it? has Nature left it to be regulated by chance? By no means. It is regulated by certain principles, which are parts of our conſtitution; whether they ought to be called animal principles, or inſtinctive principles, or what name we give to them, is of ſmall moment; but they are certainly different from the faculty of

reaſon: They do the office of reaſon while it is in its infancy, and muſt, as it were, be carried in a nurſe's arms, and they are leading ſtrings to it in its gradual progreſs.

From what has been ſaid, I think it appears, that our original powers of perceiving objects by our ſenſes receive great improvement by uſe and habit; and without this improvement, would be altogether inſufficient for the purpoſes of life. The daily occurrences of life not only add to our ſtock of knowledge, but give additional perceptive powers to our ſenſes; and time gives us the uſe of our eyes and ears, as well as of our hands and legs.

This is the greateſt and moſt important improvement of our external ſenſes. It is to be found in all men come to years of underſtanding, but is various in different perſons according to their different occupations, and the different circumſtances in which they are placed. Every artiſt acquires an eye as well as a hand in his own profeſſion: His eye becomes ſkilled in perceiving, no leſs than his hand in executing, what belongs to his employment.

Beſides this improvement of our ſenſes, which Nature produces without our intention, there are various ways in which they may be improved, or their defects remedied by art. As, *firſt*, by a due care of the organs of ſenſe, that they be

be in a ſound and natural ſtate. This belongs to the department of the Medical Faculty.

Secondly, By accurate attention to the objects of ſenſe. The effects of ſuch attention in improving our ſenſes appear in every art. The artiſt, by giving more attention to certain objects than others do, by that means perceives many things in thoſe objects which others do not. Thoſe who happen to be deprived of one ſenſe, frequently ſupply that defect in a great degree, by giving more accurate attention to the objects of the ſenſes they have. The blind have often been known to acquire uncommon acuteneſs in diſtinguiſhing things by feeling and hearing; and the deaf are uncommonly quick in reading mens thoughts in their countenance.

A *third* way in which our ſenſes admit of improvement, is, by additional organs or inſtruments contrived by art. By the invention of optical glaſſes, and the gradual improvement of them, the natural power of viſion is wonderfully improved, and a vaſt addition made to the ſtock of knowledge which we acquire by the eye. By ſpeaking trumpets, and ear trumpets, ſome improvement has been made in the ſenſe of hearing. Whether by ſimilar inventions the other ſenſes may be improved, ſeems uncertain.

A *fourth* method by which the information got by our ſenſes may be improved, is, by diſcovering the connection which Nature hath eſta-

bliſhed between the ſenſible qualities of objects and their more latent qualities.

By the ſenſible qualities of bodies, I underſtand thoſe that are perceived immediately by the ſenſes, ſuch as their colour, figure, feeling, ſound, taſte, ſmell. The various modifications, and various combinations of theſe, are innumerable; ſo that there are hardly two individual bodies in Nature that may not be diſtinguiſhed by their ſenſible qualities.

The latent qualities are ſuch as are not immediately diſcovered by our ſenſes; but diſcovered, ſometimes by accident, ſometimes by experiment or obſervation. The moſt important part of our knowledge of bodies, is the knowledge of the latent qualities of the ſeveral ſpecies, by which they are adapted to certain purpoſes, either for food, or medicine, or agriculture, or for the materials or utenſils of ſome art or manufacture.

I am taught, that certain ſpecies of bodies have certain latent qualities; but how ſhall I know that this individual is of ſuch a ſpecies? This muſt be known by the ſenſible qualities which characteriſe the ſpecies. I muſt know that this is bread, and that wine, before I eat the one or drink the other. I muſt know that this is rhubarb, and that opium, before I uſe the one or the other for medicine.

It is one branch of human knowledge to know the names of the various ſpecies of natural and artificial

artificial bodies, and to know the ſenſible qualities by which they are aſcertained to be of ſuch a ſpecies, and by which they are diſtinguiſhed from one another. It is another branch of knowledge to know the latent qualities of the ſeveral ſpecies, and the uſes to which they are ſubſervient.

The man who poſſeſſes both theſe branches, is informed by his ſenſes of innumerable things of real moment, which are hid from thoſe who poſſeſs only one, or neither. This is an improvement in the information got by our ſenſes, which muſt keep pace with the improvements made in natural hiſtory, in natural philoſophy, and in the arts.

It would be an improvement ſtill higher, if we were able to diſcover any connection between the ſenſible qualities of bodies and their latent qualities, without knowing the ſpecies, or what may have been diſcovered with regard to it.

Some Philoſophers of the firſt rate have made attempts towards this noble improvement, not without promiſing hopes of ſucceſs. Thus the celebrated LINNÆUS has attempted to point out certain ſenſible qualities by which a plant may very probably be concluded to be poiſonous, without knowing its name or ſpecies. He has given ſeveral other inſtances, wherein certain medical and œconomical virtues of plants are indicated by their external appearances. Sir ISAAC

Newton hath attempted to ſhow, that from the colours of bodies we may form a probable conjecture of the ſize of their conſtituent parts, by which the rays of light are reflected.

No man can pretend to ſet limits to the diſcoveries that may be made by human genius and induſtry, of ſuch connections between the latent and the ſenſible qualities of bodies. A wide field here opens to our view, whoſe boundaries no man can aſcertain, of improvements that may hereafter be made in the information conveyed to us by our ſenſes.

CHAP. XXII.

Of the Fallacy of the Senſes.

COMPLAINTS of the fallacy of the ſenſes have been very common in ancient and in modern times, eſpecially among the Philoſophers: And if we ſhould take for granted all that they have ſaid on this ſubject, the natural concluſion from it might ſeem to be, that the ſenſes are given to us by ſome malignant Dæmon on purpoſe to delude us, rather than that they are formed by the wiſe and beneficent Author of Nature, to give us true information of things neceſſary to our preſervation and happineſs.

The

The whole ſect of Atomiſts among the ancients, led by DEMOCRITUS, and afterwards by EPICURUS maintained, that all the qualities of bodies which the moderns call ſecondary qualities, to wit, ſmell, taſte, ſound, colour, heat and cold, are mere illuſions of ſenſe, and have no real exiſtence. PLATO maintained that we can attain no real knowledge of material things; and that eternal and immutable ideas are the only objects of real knowledge. The Academics and Sceptics anxiouſly ſought for arguments to prove the fallaciouſneſs of our ſenſes, in order to ſupport their favourite doctrine, that even in things that ſeem moſt evident, we ought to with-hold aſſent.

Among the Peripatetics we find frequent complaints that the ſenſes often deceive us, and that their teſtimony is to be ſuſpected, when it is not confirmed by reaſon, by which the errors of ſenſe may be corrected. This complaint they ſupported by many common-place inſtances; ſuch as, the crooked appearance of an oar in water; objects being magnified, and their diſtance miſtaken in a fog; the ſun and moon appearing about a foot or two in diameter, while they are really thouſands of miles; a ſquare tower being taken at a diſtance to be round. Theſe, and many ſimilar appearances, they thought to be ſufficiently accounted for from the fallacy of the ſenſes: And thus the fallacy of the

ſenſes

ſenſes was uſed as a decent cover to conceal their ignorance of the real cauſes of ſuch phænomena, and ſerved the ſame purpoſe as their occult qualities and ſubſtantial forms.

DES CARTES and his followers joined in the ſame complaint. ANTONY LE GRAND, a Philoſopher of that ſect, in the firſt chapter of his Logic, expreſſes the ſentiments of the ſect as follows: "Since all our ſenſes are fallacious, and "we are frequently deceived by them, common "reaſon adviſes, that we ſhould not put too "much truſt in them, nay, that we ſhould ſuſpect falſehood in every thing they repreſent; "for it is imprudence and temerity to truſt to "thoſe who have but once deceived us; and if "they err at any time, they may be believed al"ways to err. They are given by Nature for "this purpoſe only, to warn us of what is uſe"ful and what is hurtful to us. The order of "Nature is perverted when we put them to any "other uſe, and apply them for the knowledge "of truth."

When we conſider, that the active part of mankind, in all ages from the beginning of the world, have reſted their moſt important concerns upon the teſtimony of ſenſe, it will be very difficult to reconcile their conduct with the ſpeculative opinion ſo generally entertained of the fallaciouſneſs of the ſenſes. And it ſeems to be a very unfavourable account of the workmanſhip

ſhip of the Supreme Being, to think that he has given us one faculty to deceive us, to wit, our ſenſes, and another faculty, to wit, our reaſon, to detect the fallacy.

It deſerves, therefore, to be conſidered, whether the fallaciouſneſs of our ſenſes be not a common error, which men have been led into, from a deſire to conceal their ignorance, or to apologiſe for their miſtakes.

There are two powers which we owe to our external ſenſes, ſenſation, and the perception of external objects.

It is impoſſible that there can be any fallacy in ſenſation: For we are conſcious of all our ſenſations, and they can neither be any other in their nature, nor greater or leſs in their degree than we feel them. It is impoſſible that a man ſhould be in pain, when he does not feel pain; and when he feels pain, it is impoſſible that his pain ſhould not be real, and in its degree what it is felt to be; and the ſame thing may be ſaid of every ſenſation whatſoever. An agreeable or an uneaſy ſenſation may be forgot when it is paſt, but when it is preſent, it can be nothing but what we feel.

If, therefore, there be any fallacy in our ſenſes, it muſt be in the perception of external objects, which we ſhall next conſider.

And here I grant that we can conceive powers of perceiving external objects more perfect than ours,

ours, which, poſſibly, beings of a higher order may enjoy. We can perceive external objects only by means of bodily organs; and theſe are liable to various diſorders, which ſometimes affect our powers of perception. The nerves and brain, which are interior organs of perception, are likewiſe liable to diſorders, as every part of the human frame is.

The imagination, the memory, the judging and reaſoning powers, are all liable to be hurt, or even deſtroyed, by diſorders of the body, as well as our powers of perception; but we do not on this account call them fallacious.

Our ſenſes, our memory, and our reaſon, are all limited and imperfect: This is the lot of humanity: But they are ſuch as the Author of our being ſaw to be beſt fitted for us in our preſent ſtate. Superior natures may have intellectual powers which we have not, or ſuch as we have, in a more perfect degree, and leſs liable to accidental diſorders: But we have no reaſon to think that God has given fallacious powers to any of his creatures: This would be to think diſhonourably of our Maker, and would lay a foundation for univerſal ſcepticiſm.

The appearances commonly imputed to the fallacy of the ſenſes are many, and of different kinds; but I think they many be reduced to the four following claſſes.

Firſt,

Firſt, Many things called deceptions of the ſenſes are only concluſions raſhly drawn from the teſtimony of the ſenſes. In theſe caſes the teſtimony of the ſenſes is true, but we raſhly draw a concluſion from it, which does not neceſſarily follow. We are diſpoſed to impute our errors rather to falſe information than to inconcluſive reaſoning, and to blame our ſenſes for the wrong concluſions we draw from their teſtimony.

Thus, when a man has taken a counterfeit guinea for a true one, he ſays his ſenſes deceived him; but he lays the blame where it ought not to be laid: For we may aſk him, Did your ſenſes give a falſe teſtimony of the colour, or of the figure, or of the impreſſion? No. But this is all that they teſtified, and this they teſtified truly: From theſe premiſes you concluded that it was a true guinea, but this concluſion does not follow; you erred therefore, not by relying upon the teſtimony of ſenſe, but by judging raſhly from its teſtimony: Not only are your ſenſes innocent of this error, but it is only by their information that it can be diſcovered. If you conſult them properly, they will inform you that what you took for a guinea is baſe metal, or is deficient in weight, and this can only be known by the teſtimony of ſenſe.

I remember to have met with a man who thought the argument uſed by Proteſtants againſt the Popiſh doctrine of tranſubſtantiation, from the teſtimony

teſtimony of our ſenſes, inconcluſive; becauſe, ſaid he, inſtances may be given, where ſeveral of our ſenſes may deceive us: How do we know then that there may not be caſes wherein they all deceive us, and no ſenſe is left to detect the fallacy? I begged of him to know an inſtance wherein ſeveral of our ſenſes deceive us. I take, ſaid he, a piece of ſoft turf, I cut it into the ſhape of an apple; with the eſſence of apples, I give it the ſmell of an apple; and with paint, I can give it the ſkin and colour of an apple. Here then is a body, which, if you judge by your eye, by your touch, or by your ſmell, is an apple.

To this I would anſwer, that no one of our ſenſes deceives us in this caſe. My ſight and touch teſtify that it has the ſhape and colour of an apple: This is true. The ſenſe of ſmelling teſtifies that it has the ſmell of an apple: This is likewiſe true, and is no deception. Where then lies the deception? It is evident it lies in this, that becauſe this body has ſome qualities belonging to an apple, I conclude that it is an apple. This is a fallacy, not of the ſenſes, but of inconcluſive reaſoning.

Many falſe judgments that are accounted deceptions of ſenſe, ariſe from our miſtaking relative motion for real or abſolute motion. Theſe can be no deceptions of ſenſe, becauſe by our ſenſes we perceive only the relative motions of bodies;

bodies; and it is by reaſoning that we infer the real from the relative which we perceive. A little reflection may ſatisfy us of this.

It was before obſerved, that we perceive extenſion to be one ſenſible quality of bodies, and thence are neceſſarily led to conceive ſpace, though ſpace be of itſelf no object of ſenſe. When a body is removed out of its place, the ſpace which it filled remains empty till it is filled by ſome other body, and would remain if it ſhould never be filled. Before any body exiſted, the ſpace which bodies now occupy was empty ſpace, capable of receiving bodies; for no body can exiſt where there is no ſpace to contain it. There is ſpace therefore wherever bodies exiſt, or can exiſt.

Hence it is evident that ſpace can have no limits. It is no leſs evident that it is immoveable. Bodies placed in it are moveable, but the place where they were cannot be moved; and we can as eaſily conceive a thing to be moved from itſelf, as one part of ſpace brought nearer to, or removed farther from another.

This ſpace therefore which is unlimited and immoveable, is called by Philoſophers *abſolute ſpace*. Abſolute or real motion is a change of place in abſolute ſpace.

Our ſenſes do not teſtify the abſolute motion or abſolute reſt of any body. When one body removes from another, this may be diſcerned by the

the ſenſes; but whether any body keeps the ſame part of abſolute ſpace, we do not perceive by our ſenſes: When one body ſeems to remove from another, we can infer with certainty that there is abſolute motion, but whether in the one or the other, or partly in both, is not diſcerned by ſenſe.

Of all the prejudices which philoſophy contradicts, I believe there is none ſo general as that the earth keeps its place unmoved. This opinion ſeems to be univerſal, till it is corrected by inſtruction, or by philoſophical ſpeculation. Thoſe who have any tincture of education are not now in danger of being held by it, but they find at firſt a reluctance to believe that there are antipodes; that the earth is ſpherical, and turns round its axis every day, and round the ſun every year: They can recollect the time when reaſon ſtruggled with prejudice upon theſe points, and prevailed at length, but not without ſome effort.

The cauſe of a prejudice ſo very general is not unworthy of inveſtigation. But that is not our preſent buſineſs. It is ſufficient to obſerve, that it cannot juſtly be called a fallacy of ſenſe; becauſe our ſenſes teſtify only the change of ſituation of one body in relation to other bodies, and not its change of ſituation in abſolute ſpace. It is only the relative motion of bodies that we perceive, and that, we perceive truly. It is the province

province of reaſon and philoſophy, from the relative motions which we perceive, to collect the real and abſolute motions which produce them.

All motion muſt be eſtimated from ſome point or place which is ſuppoſed to be at reſt. We perceive not the points of abſolute ſpace, from which real and abſolute motion muſt be reckoned: And there are obvious reaſons that lead mankind in the ſtate of ignorance, to make the earth the fixed place from which they may eſtimate the various motions they perceive. The cuſtom of doing this from infancy, and of uſing conſtantly a language which ſuppoſes the earth to be at reſt, may perhaps be the cauſe of the general prejudice in favour of this opinion.

Thus it appears, that if we diſtinguiſh accurately between what our ſenſes really and naturally teſtify, and the concluſions which we draw from their teſtimony by reaſoning, we ſhall find many of the errors, called fallacies of the ſenſes, to be no fallacy of the ſenſes, but raſh judgments, which are not to be imputed to our ſenſes.

Secondly, Another claſs of errors imputed to the fallacy of the ſenſes, are thoſe which we are liable to in our acquired perceptions. Acquired perception is not properly the teſtimony of thoſe ſenſes which God hath given us, but a concluſion drawn from what the ſenſes teſtify. In our paſt experience, we have found certain things conjoined with what our ſenſes teſtify.

We are led by our conſtitution to expect this conjunction in time to come; and when we have often found it in our experience to happen, we acquire a firm belief, that the things which we have found thus conjoined are connected in nature, and that one is a ſign of the other. The appearance of the ſign immediately produces the belief of its uſual attendant, and we think we perceive the one as well as the other.

That ſuch concluſions are formed even in infancy, no man can doubt; nor is it leſs certain that they are confounded with the natural and immediate perceptions of ſenſe, and in all languages are called by the ſame name. We are therefore authoriſed by language to call them perception, and muſt often do ſo, or ſpeak unintelligibly. But philoſophy teaches us in this, as in many other inſtances, to diſtinguiſh things which the vulgar confound. I have therefore given the name of acquired perception to ſuch concluſions, to diſtinguiſh them from what is naturally, originally, and immediately teſtified by our ſenſes. Whether this acquired perception is to be reſolved into ſome proceſs of reaſoning, of which we have loſt the remembrance, as ſome Philoſophers think, or whether it reſults from ſome part of our conſtitution diſtinct from reaſon, as I rather believe, does not concern the preſent ſubject. If the firſt of theſe opinions be true, the errors of acquired perception will fall under

under the firſt claſs before mentioned. If not, it makes a diſtinct claſs by itſelf. But whether the one or the other be true, it muſt be obſerved, that the errors of acquired perception are not properly fallacies of our ſenſes.

Thus when a globe is ſet before me, I perceive by my eyes that it has three dimenſions and a ſpherical figure. To ſay that this is not perception, would be to reject the authority of cuſtom in the uſe of words, which no wiſe man will do: But that it is not the teſtimony of my ſenſe of ſeeing, every Philoſopher knows. I ſee only a circular form, having the light and colour diſtributed in a certain way over it. But being accuſtomed to obſerve this diſtribution of light and colour only in a ſpherical body, I immediately, from what I ſee, believe the object to be ſpherical, and ſay that I ſee or perceive it to be ſpherical. When a painter, by an exact imitation of that diſtribution of light and colour, which I have been accuſtomed to ſee only in a real ſphere, deceives me, ſo as to make me take that to be a real ſphere, which is only a painted one, the teſtimony of my eye is true; the colour and viſible figure of the object is truly what I ſee it to be: The error lies in the concluſion drawn from what I ſee, to wit, that the object has three dimenſions and a ſpherical figure. The concluſion is falſe in this caſe; but whatever be the

origin of this concluſion, it is not properly the teſtimony of ſenſe.

To this claſs we muſt refer the judgments we are apt to form of the diſtance and magnitude of the heavenly bodies, and of terreſtrial objects ſeen on high. The miſtakes we make of the magnitude and diſtance of objects ſeen through optical glaſſes, or through an atmoſphere uncommonly clear, or uncommonly foggy, belong likewiſe to this claſs.

The errors we are led into in acquired perception are very rarely hurtful to us in the conduct of life; they are gradually corrected by a more enlarged experience, and a more perfect knowledge of the laws of Nature: And the general laws of our conſtitution, by which we are ſometimes led into them, are of the greateſt utility.

We come into the world ignorant of every thing, and by our ignorance expoſed to many dangers and to many miſtakes. The regular train of cauſes and effects, which Divine Wiſdom has eſtabliſhed, and which directs every ſtep of our conduct in advanced life, is unknown, until it is gradually diſcovered by experience.

We muſt learn much from experience before we can reaſon, and therefore muſt be liable to many errors. Indeed, I apprehend, that, in the firſt part of life, reaſon would do us much more hurt than good. Were we ſenſible of our condition in that period, and capable of reflecting upon

upon it, we ſhould be like a man in the dark, ſurrounded with dangers, where every ſtep he takes may be into a pit. Reaſon would direct him to ſit down, and wait till he could ſee about him.

In like manner, if we ſuppoſe an infant endowed with reaſon, it would direct him to do nothing, till he knew what could be done with ſafety. This he can only know by experiment, and experiments are dangerous. Reaſon directs, that experiments that are full of danger ſhould not be made without a very urgent cauſe. It would therefore make the infant unhappy, and hinder his improvement by experience.

Nature has followed another plan. The child, unapprehenſive of danger, is led by inſtinct to exert all his active powers, to try every thing without the cautious admonitions of reaſon, and to believe every thing that is told him. Sometimes he ſuffers by his raſhneſs what reaſon would have prevented: But his ſuffering proves a ſalutary diſcipline, and makes him for the future avoid the cauſe of it. Sometimes he is impoſed upon by his credulity; but it is of infinite benefit to him upon the whole. His activity and credulity are more uſeful qualities, and better inſtructors than reaſon would be; they teach him more in a day than reaſon would do in a year; they furniſh a ſtock of materials for reaſon to work upon; they make him eaſy and happy

in a period of his exiſtence, when reaſon could only ſerve to ſuggeſt a thouſand tormenting anxieties and fears: And he acts agreeably to the conſtitution and intention of Nature, even when he does and believes what reaſon would not juſtify. So that the wiſdom and goodneſs of the Author of Nature is no leſs conſpicuous in with-holding the exerciſe of our reaſon in this period, than in beſtowing it when we are ripe for it.

A *third* claſs of errors, aſcribed to the fallacy of the ſenſes, proceds from ignorance of the laws of Nature.

The laws of Nature (I mean not moral but phyſical laws) are learned, either from our own experience, or the experience of others, who have had occaſion to obſerve the courſe of Nature.

Ignorance of thoſe laws, or inattention to them, is apt to occaſion falſe judgments with regard to the objects of ſenſe, eſpecially thoſe of hearing and of ſight; which falſe judgments are often, without good reaſon, called fallacies of ſenſe.

Sounds affect the ear differently, according as the ſounding body is before or behind us, on the right hand or on the left, near or at a great diſtance. We learn, by the manner in which the ſound affects the ear, on what hand we are to look for the ſounding body; and in moſt caſes

we

we judge right. But we are ſometimes deceived by echos, or by whiſpering galleries, or ſpeaking trumpets, which return the ſound, or alter its direction, or convey it to a diſtance without diminution.

The deception is ſtill greater, becauſe more uncommon, which is ſaid to be produced by Gaſtriloquiſts, that is, perſons who have acquired the art of modifying their voice, ſo that it ſhall affect the ear of the hearers, as if it came from another perſon, or from the clouds, or from under the earth.

I never had the fortune to be acquainted with any of theſe artiſts, and therefore cannot ſay to what degree of perfection the art may have been carried.

I apprehend it to be only ſuch an imperfect imitation as may deceive thoſe who are inattentive, or under a panic. For if it could be carried to perfection, a Gaſtriloquiſt would be as dangerous a man in ſociety as was the ſhepherd GIGES, who, by turning a ring upon his finger, could make himſelf inviſible, and by that means, from being the King's ſhepherd, became King of Lydia.

If the Gaſtriloquiſts have all been too good men to uſe their talents to the detriment of others, it might at leaſt be expected that ſome of them ſhould apply it to their own advantage. If it could be brought to any conſiderable degree

of perfection, it ſeems to be as proper an engine for drawing money by the exhibition of it, as legerdemain or rope-dancing. But I have never heard of any exhibition of this kind, and therefore am apt to think that it is too coarſe an imitation to bear exhibition even to the vulgar.

Some are ſaid to have the art of imitating the voice of another ſo exactly, that in the dark they might be taken for the perſon whoſe voice they imitate. I am apt to think, that this art alſo, in the relations made of it, is magnified beyond the truth, as wonderful relations are apt to be, and that an attentive ear would be able to diſtinguiſh the copy from the original.

It is indeed a wonderful inſtance of the accuracy as well as of the truth of our ſenſes, in things that are of real uſe in life, that we are able to diſtinguiſh all our acquaintance by their countenance, by their voice, and by their handwriting, when at the ſame time we are often unable to ſay by what minute difference the diſtinction is made; and that we are ſo very rarely deceived in matters of this kind, when we give proper attention to the informations of ſenſe.

However, if any caſe ſhould happen, in which ſounds produced by different cauſes are not diſtinguiſhable by the ear, this may prove that our ſenſes are imperfect, but not that they are fallacious. The ear may not be able to draw the

the juſt concluſion, but it is only our ignorance of the laws of ſound that leads us to a wrong concluſion.

Deceptions of ſight, ariſing from ignorance of the laws of Nature, are more numerous, and more remarkable than thoſe of hearing.

The rays of light, which are the means of ſeeing, paſs in right lines from the object to the eye, when they meet with no obſtruction; and we are by Nature led to conceive the viſible object to be in the direction of the rays that come to the eye. But the rays may be reflected, refracted, or inflected in their paſſage from the object to the eye, according to certain fixed laws of Nature, by which means their direction may be changed, and conſequently the apparent place, figure, or magnitude of the object.

Thus a child ſeeing himſelf in a mirror, thinks he ſees another child behind the mirror, that imitates all his motions. But even a child ſoon gets the better of this deception, and knows that he ſees himſelf only.

All the deceptions made by teleſcopes, microſcopes, camera obſcuras, magic lanthorns, are of the ſame kind, though not ſo familiar to the vulgar. The ignorant may be deceived by them; but to thoſe who are acquainted with the principles of optics, they give juſt and true information, and the laws of Nature by which they are produced are of infinite benefit to mankind.

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There remains another claſs of errors, commonly called deceptions of ſenſe, and the only one, as I apprehend, to which that name can be given with propriety: I mean ſuch as proceed from ſome diſorder or preternatural ſtate, either of the external organ, or of the nerves and brain, which are internal organs of perception.

In a delirium, or in madneſs, perception, memory, imagination, and our reaſoning powers, are ſtrangely diſordered and confounded. There are likewiſe diſorders which affect ſome of our ſenſes, while others are ſound. Thus, a man may feel pain in his toes after the leg is cut off. He may feel a little ball double, by croſſing his fingers. He may ſee an object double, by not directing both eyes properly to it. By preſſing the ball of his eye, he may ſee colours that are not real. By the jaundice in his eyes, he may miſtake colours. Theſe are more properly deceptions of ſenſe than any of the claſſes before mentioned.

We muſt acknowledge it to be the lot of human nature, that all the human faculties are liable, by accidental cauſes, to be hurt and unfitted for their natural functions, either wholly or in part: But as this imperfection is common to them all, it gives no juſt ground for accounting any one of them fallacious more than another.

Upon the whole, it ſeems to have been a common error of Philoſophers to account the

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ſenſes fallacious. And to this error they have added another, that one uſe of reaſon is to detect the fallacies of ſenſe.

It appears, I think, from what has been ſaid, that there is no more reaſon to account our ſenſes fallacious, than our reaſon, our memory, or any other faculty of judging which Nature hath given us. They are all limited and imperfect; but wiſely ſuited to the preſent condition of man. We are liable to error and wrong judgment in the uſe of them all; but as little in the informations of ſenſe as in the deductions of reaſoning. And the errors we fall into with regard to objects of ſenſe are not corrected by reaſon, but by more accurate attention to the informations we may receive by our ſenſes themſelves.

Perhaps the pride of Philoſophers may have given occaſion to this error. Reaſon is the faculty wherein they aſſume a ſuperiority to the unlearned. The informations of ſenſe are common to the Philoſopher and to the moſt illiterate: They put all men upon a level; and therefore are apt to be undervalued. We muſt, however, be beholden to the informations of ſenſe for the greateſt and moſt intereſting part of our knowledge. The wiſdom of Nature has made the moſt uſeful things moſt common, and they ought not to be deſpiſed on that account. Nature likewiſe forces our belief in thoſe informations, and

and all the attempts of philoſophy to weaken it are fruitleſs and vain.

I add only one obſervation to what has been ſaid upon this ſubject. It is, that there ſeems to be a contradiction between what Philoſophers teach concerning ideas, and their doctrine of the fallaciouſneſs of the ſenſes. We are taught that the office of the ſenſes is only to give us the ideas of external objects. If this be ſo, there can be no fallacy in the ſenſes. Ideas can neither be true nor falſe. If the ſenſes teſtify nothing, they cannot give falſe teſtimony. If they are not judging faculties, no judgment can be imputed to them, whether falſe or true. There is, therefore, a contradiction between the common doctrine concerning ideas and that of the fallaciouſneſs of the ſenſes. Both may be falſe, as I believe they are, but both cannot be true.

ESSAY

ESSAY III.

OF MEMORY.

CHAP I.

Things obvious and certain with regard to Memory.

IN the gradual progreſs of man, from infancy to maturity, there is a certain order in which his faculties are unfolded, and this ſeems to be the beſt order we can follow in treating of them.

The external ſenſes appear firſt; memory ſoon follows, which we are now to conſider.

It is by memory that we have an immediate knowledge of things paſt: The ſenſes give us information of things only as they exiſt in the preſent moment; and this information, if it were not preſerved by memory, would vaniſh inſtantly, and leave us as ignorant as if it had never been.

Memory

Memory muſt have an object. Every man who remembers muſt remember ſomething, and that which he remembers is called the object of his remembrance. In this, memory agrees with perception, but differs from ſenſation, which has no object but the feeling itſelf.

Every man can diſtinguiſh the thing remembered from the remembrance of it. We may remember any thing which we have ſeen, or heard, or known, or done, or ſuffered; but the remembrance of it is a particular act of the mind which now exiſts, and of which we are conſcious. To confound theſe two is an abſurdity, which a thinking man could not be led into, but by ſome falſe hypotheſis which hinders him from reflecting upon the thing which he would explain by it.

In memory we do not find ſuch a train of operations connected by our conſtitution as in perception. When we perceive an object by our ſenſes, there is, firſt, ſome impreſſion made by the object upon the organ of ſenſe, either immediately or by means of ſome medium. By this an impreſſion is made upon the nerves and brain, in conſequence of which we feel ſome ſenſation; and that ſenſation is attended by that conception and belief of the external object which we call perception. Theſe operations are ſo connected in our conſtitution, that it is difficult to disjoin them in our conceptions, and to attend to each without

without confounding it with the others. But in the operations of memory we are free from this embarraſſment; they are eaſily diſtinguiſhed from all other acts of the mind, and the names which denote them are free from all ambiguity.

The object of memory, or thing remembered, muſt be ſomething that is paſt; as the object of perception and of conſciouſneſs muſt be ſomething which is preſent: What now is, cannot be an object of memory; neither can that which is paſt and gone be an object of perception or of conſciouſneſs.

Memory is always accompanied with the belief of that which we remember, as perception is accompanied with the belief of that which we perceive, and conſciouſneſs with the belief of that whereof we are conſcious. Perhaps in infancy, or in a diſorder of mind, things remembered may be confounded with thoſe which are merely imagined; but in mature years, and in a ſound ſtate of mind, every man feels that he muſt believe what he diſtinctly remembers, though he can give no other reaſon of his belief, but that he remembers the thing diſtinctly; whereas, when he merely imagines a thing ever ſo diſtinctly, he has no belief of it upon that account.

This belief, which we have from diſtinct memory, we account real knowledge, no leſs certain than if it was grounded on demonſtration;

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no man in his wits calls it in queſtion, or will hear any argument againſt it. The teſtimony of witneſſes in cauſes of life and death depends upon it, and all the knowledge of mankind of paſt events is built on this foundation.

There are caſes in which a man's memory is leſs diſtinct and determinate, and where he is ready to allow that it may have failed him; but this does not in the leaſt weaken its credit, when it is perfectly diſtinct.

Memory implies a conception and belief of paſt duration; for it is impoſſible that a man ſhould remember a thing diſtinctly, without believing ſome interval of duration, more or leſs, to have paſſed between the time it happened, and the preſent moment; and I think it is impoſſible to ſhow how we could acquire a notion of duration if we had no memory.

Things remembered muſt be things formerly perceived or known. I remember the tranſit of Venus over the ſun in the year 1769. I muſt therefore have perceived it at the time it happened, otherwiſe I could not now remember it. Our firſt acquaintance with any object of thought cannot be by remembrance. Memory can only produce a continuance or renewal of a former acquaintance with the thing remembered.

The remembrance of a paſt event is neceſſarily accompanied with the conviction of our own exiſtence at the time the event happened. I cannot

not remember a thing that happened a year ago, without a conviction as ſtrong as memory can give, that I, the ſame identical perſon who now remember that event, did then exiſt.

What I have hitherto ſaid concerning memory, I conſider as principles which appear obvious and certain to every man who will take the pains to reflect upon the operations of his own mind. They are facts of which every man muſt judge by what he feels; and they admit of no other proof but an appeal to every man's own reflection. I ſhall therefore take them for granted in what follows, and ſhall firſt draw ſome concluſions from them, and then examine the theories of Philoſophers concerning memory, and concerning duration, and our perſonal identity, of which we acquire the knowledge by memory.

CHAP. II.

Memory an original Faculty.

FIRST, I think it appears that memory is an original faculty given us by the Author of our being, of which we can give no account, but that we are ſo made.

The knowledge which I have of things paſt by my memory, ſeems to me as unaccountable as an immediate knowledge would be of things to

come; and I can give no reaſon why I ſhould have the one and not the other, but that ſuch is the will of my Maker. I find in my mind a diſtinct conception and a firm belief of a ſeries of paſt events; but how this is produced I know not. I call it memory, but this is only giving a name to it; it is not an account of its cauſe. I believe moſt firmly what I diſtinctly remember; but I can give no reaſon of this belief. It is the inſpiration of the Almighty that gives me this underſtanding.

When I believe the truth of a mathematical axiom, or of a mathematical propoſition, I ſee that it muſt be ſo: Every man who has the ſame conception of it ſees the ſame. There is a neceſſary and an evident connection between the ſubject and the predicate of the propoſition; and I have all the evidence to ſupport my belief which I can poſſibly conceive.

When I believe that I waſhed my hands and face this morning, there appears no neceſſity in the truth of this propoſition. It might be, or it might not be. A man may diſtinctly conceive it without believing it at all. How then do I come to believe it? I remember it diſtinctly. This is all I can ſay. This remembrance is an act of my mind. Is it impoſſible that this act ſhould be, if the event had not happened? I confeſs I do not ſee any neceſſary connection between the one and the other. If any man can

ſhow

ſhow ſuch a neceſſary connection, then I think that belief which we have of what we remember will be fairly accounted for; but if this cannot be done, that belief is unaccountable, and we can ſay no more but that it is the reſult of our conſtitution.

Perhaps it may be ſaid, that the experience we have had of the fidelity of memory is a good reaſon for relying upon its teſtimony. I deny not that this may be a reaſon to thoſe who have had this experience, and who reflect upon it. But I believe there are few who ever thought of this reaſon, or who found any need of it. It muſt be ſome very rare occaſion that leads a man to have recourſe to it; and in thoſe who have done ſo, the teſtimony of memory was believed before the experience of its fidelity, and that belief could not be cauſed by the experience which came after it.

We know ſome abſtract truths, by comparing the terms of the propoſition which expreſſes them, and perceiving ſome neceſſary relation or agreement between them. It is thus I know that two and three make five; that the diameters of a circle are all equal. Mr Locke having diſcovered this ſource of knowledge, too raſhly concluded that all human knowledge might be derived from it; and in this he has been followed very generally; by Mr Hume in particular.

But I apprehend, that our knowledge of the exiſtence of things contingent can never be traced to this ſource. I know that ſuch a thing exiſts, or did exiſt. This knowledge cannot be derived from the perception of a neceſſary agreement between exiſtence and the thing that exiſts, becauſe there is no ſuch neceſſary agreement; and therefore no ſuch agreement can be perceived either immediately, or by a chain of reaſoning. The thing does not exiſt neceſſarily, but by the will and power of him that made it; and there is no contradiction follows from ſuppoſing it not to exiſt.

Whence I think it follows, that our knowledge of the exiſtence of our own thoughts, of the exiſtence of all the material objects about us, and of all paſt contingencies, muſt be derived, not from a perception of neceſſary relations or agreements, but from ſome other ſource.

Our Maker has provided other means for giving us the knowledge of theſe things; means which perfectly anſwer their end, and produce the effect intended by them. But in what manner they do this, is, I fear, beyond our ſkill to explain. We know our own thoughts, and the operations of our minds, by a power which we call conſciouſneſs: But this is only giving a name to this part of our frame. It does not explain its fabric, nor how it produces in us an irreſiſtible conviction of its informations. We perceive

ceive material objects and their ſenſible qualities by our ſenſes; but how they give us this information, and how they produce our belief in it, we know not. We know many paſt events by memory; but how it gives this information, I believe, is inexplicable.

It is well known what ſubtile diſputes were held through all the ſcholaſtic ages, and are ſtill carried on about the preſcience of the Deity. ARISTOTLE had taught, that there can be no certain foreknowledge of things contingent; and in this he has been very generally followed, upon no other grounds, as I apprehend, but that we cannot conceive how ſuch things ſhould be foreknown, and therefore conclude it to be impoſſible. Hence has ariſen an oppoſition and ſuppoſed inconſiſtency between Divine preſcience and human liberty. Some have given up the firſt in favour of the laſt, and others have given up the laſt in order to ſupport the firſt.

It is remarkable, that theſe diſputants have never apprehended that there is any difficulty in reconciling with liberty the knowledge of what is paſt, but only of what is future. It is preſcience only, and not memory, that is ſuppoſed to be hoſtile to liberty, and hardly reconcileable to it.

Yet I believe the difficulty is perfectly equal in the one caſe and in the other. I admit, that we cannot account for preſcience of the actions

of a free agent. But I maintain that we can as little account for memory of the paſt actions of a free agent. If any man thinks he can prove that the actions of a free agent cannot be foreknown, he will find the ſame arguments of equal force to prove that the paſt actions of a free agent cannot be remembered. It is true, that what is paſt did certainly exiſt. It is no leſs true, that what is future will certainly exiſt. I know no reaſoning from the conſtitution of the agent, or from his circumſtances, that has not equal ſtrength, whether it be applied to his paſt or to his future actions. The paſt was, but now is not. The future will be, but now is not. The preſent is equally connected, or unconnected with both.

The only reaſon why men have apprehended ſo great diſparity in caſes ſo perfectly like, I take to be this, That the faculty of memory in ourſelves convinces us from fact, that it is not impoſſible that an intelligent being, even a finite being, ſhould have certain knowledge of paſt actions of free agents, without tracing them from any thing neceſſarily connected with them. But having no preſcience in ourſelves correſponding to our memory of what is paſt, we find great difficulty in admitting it to be poſſible even in the Supreme Being.

A faculty which we poſſeſs in ſome degree, we eaſily admit that the Supreme Being may poſſeſs

poſſeſs in a more perfect degree; but a faculty, which has nothing correſponding to it in our conſtitution, we will hardly allow to be poſſible. We are ſo conſtituted as to have an intuitive knowledge of many things paſt; but we have no intuitive knowledge of the future. We might perhaps have been ſo conſtituted as to have an intuitive knowledge of the future, but not of the paſt; nor would this conſtitution have been more unaccountable than the preſent, though it might be much more inconvenient. Had this been our conſtitution, we ſhould have found no difficulty in admitting that the Deity may know all things future, but very much in admitting his knowledge of things that are paſt.

Our original faculties are all unaccountable. Of theſe memory is one. He only who made them, comprehends fully how they are made, and how they produce in us not only a conception, but a firm belief and aſſurance of things which it concerns us to know.

CHAP. III.

Of Duration.

FROM the principles laid down in the firſt chapter of this Eſſay, I think it appears, that our notions of duration, as well as our be-

lief of it, is got by the faculty of memory. It is eſſential to every thing remembered that it be ſomething which is paſt; and we cannot conceive a thing to be paſt, without conceiving ſome duration, more or leſs, between it and the preſent. As ſoon therefore as we remember any thing, we muſt have both a notion and a belief of duration. It is neceſſarily ſuggeſted by every operation of our memory; and to that faculty it ought to be aſcribed. This is therefore a proper place to conſider what is known concerning it.

Duration, extenſion, and number, are the meaſures of all things ſubject to menſuration. When we apply them to finite things which are meaſured by them, they ſeem of all things to be the moſt diſtinctly conceived, and moſt within the reach of human underſtanding.

Extenſion having three dimenſions, has an endleſs variety of modifications, capable of being accurately defined; and their various relations furniſh the human mind with its moſt ample field of demonſtrative reaſoning. Duration having only one dimenſion, has fewer modifications; but theſe are clearly underſtood; and their relations admit of meaſure, proportion, and demonſtrative reaſoning.

Number is called diſcrete quantity, becauſe it is compounded of units, which are all equal and ſimilar, and it can only be divided into units.

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This is true, in ſome ſenſe, even of fractions of unity, to which we now commonly give the name of number. For in every fractional number the unit is ſuppoſed to be ſubdivided into a certain number of equal parts, which are the units of that denomination, and the fractions of that denomination are only diviſible into units of the ſame denomination. Duration and extenſion are not diſcrete, but continued quantity. They conſiſt of parts perfectly ſimilar, but diviſible without end.

In order to aid our conception of the magnitude and proportions of the various intervals of duration, we find it neceſſary to give a name to ſome known portion of it, ſuch as an hour, a day, a year. Theſe we conſider as units, and by the number of them contained in a larger interval, we form a diſtinct conception of its magnitude. A ſimilar expedient we find neceſſary to give us a diſtinct conception of the magnitudes and proportions of things extended. Thus, number is found neceſſary, as a common meaſure of extenſion and duration. But this perhaps is owing to the weakneſs of our underſtanding. It has even been diſcovered, by the ſagacity of Mathematicians, that this expedient does not in all caſes anſwer its intention. For there are proportions of continued quanity, which cannot be perfectly expreſſed by numbers; ſuch as that between

between the diagonal and ſide of a ſquare, and many others.

The parts of duration have to other parts of it the relations of prior and poſterior, and to the preſent they have the relations of paſt and future. The notion of paſt is immediately ſuggeſted by memory, as has been before obſerved. And when we have got the notions of preſent and paſt, and of prior and poſterior, we can from theſe frame a notion of the future; for the future is that which is poſterior to the preſent. Nearneſs and diſtance are relations equally applicable to time and to place. Diſtance in time, and diſtance in place, are things ſo different in their nature, and ſo like in their relation, that it is difficult to determine whether the name of diſtance is applied to both in the ſame or an analogical ſenſe.

The extenſion of bodies which we perceive by our ſenſes, leads us neceſſarily to the conception and belief of a ſpace which remains immoveable when the body is removed. And the duration of events which we remember leads us neceſſarily to the conception and belief of a duration, which would have gone on uniformly, though the event had never happened.

Without ſpace there can be nothing that is extended. And without time there can be nothing that hath duration. This I think undeniable. And yet we find that extenſion and duration

ration are not more clear and intelligible than ſpace and time are dark and difficult objects of contemplation.

As there muſt be ſpace wherever any thing extended does or can exiſt, and time when there is or can be any thing that has duration, we can ſet no bounds to either, even in our imagination. They defy all limitation. The one ſwells in our conception to immenſity, the other to eternity.

An eternity paſt is an object which we cannot comprehend; but a beginning of time, unleſs we take it in a figurative ſenſe, is a contradiction. By a common figure of ſpeech, we give the name of time to thoſe motions and revolutions by which we meaſure it, ſuch as days and years. We can conceive a beginning of theſe ſenſible meaſures of time, and ſay that there was a time when they were not, a time undiſtinguiſhed by any motion or change; but to ſay that there was a time before all time, is a contradiction.

All limited duration is comprehended in time, and all limited extenſion in ſpace. Theſe, in their capacious womb, contain all finite exiſtences, but are contained by none. Created things have their particular place in ſpace, and their particular place in time; but time is every where, and ſpace at all times. They embrace each the other, and have that myſterious union which

which the ſchoolmen conceived between ſoul and body. The whole of each is in every part of the other.

We are at a loſs to what category or claſs of things we ought to refer them. They are not beings, but rather the receptacles of every created being, without which it could not have had the poſſibility of exiſtence. Philoſophers have endeavoured to reduce all the objects of human thought to theſe three claſſes, of ſubſtances, modes, and relations. To which of them ſhall we refer time, ſpace and number, the moſt common objects of thought?

Sir ISAAC NEWTON thought, that the Deity, by exiſting every where, and at all times, conſtitutes time and ſpace, immenſity and eternity. This probably ſuggeſted to his great friend Dr CLARKE what he calls the argument *a priori* for the exiſtence of an immenſe and eternal Being. Space and time, he thought, are only abſtract or partial conceptions of an immenſity and eternity, which forces itſelf upon our belief. And as immenſity and eternity are not ſubſtances, they muſt be the attributes of a Being who is neceſſarily immenſe and eternal. Theſe are the ſpeculations of men of ſuperior genius. But whether they be as ſolid as they are ſublime, or whether they be the wanderings of imagination in a region beyond the limits of human underſtanding, I am unable to determine.

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The ſchoolmen made eternity to be a *nunc ſtans*, that is, a moment of time, that ſtands ſtill. This was to put a ſpoke into the wheel of time, and might give ſatisfaction to thoſe who are to be ſatisfied by words without meaning. But I can as eaſily believe a circle to be a ſquare as time to ſtand ſtill.

Such paradoxes and riddles, if I may ſo call them, men are involuntarily led into when they reaſon about time and ſpace, and attempt to comprehend their nature. They are probably things of which the human faculties give an imperfect and inadequate conception. Hence difficulties ariſe which we in vain attempt to overcome, and doubts which we are unable to reſolve. Perhaps ſome faculty which we poſſeſs not, is neceſſary to remove the darkneſs which hangs over them, and makes us ſo apt to bewilder ourſelves when we reaſon about them.

CHAP. IV.

Of Identity.

THE conviction which every man has of his identity, as far back as his memory reaches, needs no aid of philoſophy to ſtrengthen it, and no philoſophy can weaken it, without firſt producing ſome degree of inſanity.

The Philoſopher, however, may very properly conſider this conviction as a phænomenon of human

human nature worthy of his attention. If he can diſcover its cauſe, an addition is made to his ſtock of knowledge: If not, it muſt be held as a part of our original conſtitution, or an effect of that conſtitution produced in a manner unknown to us.

We may obſerve, firſt of all, that this conviction is indiſpenſably neceſſary to all exerciſe of reaſon. The operations of reaſon, whether in action or in ſpeculation, are made up of ſucceſſive parts. The antecedent are the foundation of the conſequent, and without the conviction that the antecedent have been ſeen or done by me, I could have no reaſon to proceed to the conſequent, in any ſpeculation, or in any active project whatever.

There can be no memory of what is paſt without the conviction that we exiſted at the time remembered. There may be good arguments to convince me that I exiſted before the earlieſt thing I can remember; but to ſuppoſe that my memory reaches a moment farther back than my belief and conviction of my exiſtence, is a contradiction.

The moment a man loſes this conviction, as if he had drunk the water of Lethe, paſt things are done away; and, in his own belief, he then begins to exiſt. Whatever was thought, or ſaid, or done, or ſuffered, before that period, may belong to ſome other perſon; but he can never impute

impute it to himſelf, or take any ſubſequent ſtep that ſuppoſes it to be his doing.

From this it is evident, that we muſt have the conviction of our own continued exiſtence and identity, as ſoon as we are capable of thinking or doing any thing, on account of what we have thought, or done, or ſuffered before; that is, as ſoon as we are reaſonable creatures.

That we may form as diſtinct a notion as we are able of this phænomenon of the human mind, it is proper to conſider what is meant by identity in general, what by our own perſonal identity, and how we are led into that invincible belief and conviction which every man has of his own perſonal identity, as far as his memory reaches.

Identity in general, I take to be a relation between a thing which is known to exiſt at one time, and a thing which is known to have exiſted at another time. If you aſk whether they are one and the ſame, or two different things, every man of common ſenſe underſtands the meaning of your queſtion perfectly. Whence we may infer with certainty, that every man of common ſenſe has a clear and diſtinct notion of identity.

If you aſk a definition of identity, I confeſs I can give none; it is too ſimple a notion to admit of logical definition: I can ſay it is a relation, but I cannot find words to expreſs the ſpecific

cific difference between this and other relations, though I am in no danger of confounding it with any other. I can ſay that diverſity is a contrary relation, and that ſimilitude and diſſimilitude are another couple of contrary relations, which every man eaſily diſtinguiſhes in his conception from identity and diverſity.

I ſee evidently that identity ſuppoſes an uninterrupted continuance of exiſtence. That which hath ceaſed to exiſt, cannot be the ſame with that which afterwards begins to exiſt; for this would be to ſuppoſe a being to exiſt after it ceaſed to exiſt, and to have had exiſtence before it was produced, which are manifeſt contradictions. Continued uninterrupted exiſtence is therefore neceſſarily implied in identity.

Hence we may infer, that identity cannot, in its proper ſenſe, be applied to our pains, our pleaſures, our thoughts, or any operation of our minds. The pain felt this day is not the ſame individual pain which I felt yeſterday, though they may be ſimilar in kind and degree, and have the ſame cauſe. The ſame may be ſaid of every feeling, and of every operation of mind: They are all ſucceſſive in their nature like time itſelf, no two moments of which can be the ſame moment.

It is otherwiſe with the parts of abſolute ſpace. They always are, and were, and will be the ſame. So far, I think, we proceed upon clear ground

ground in fixing the notion of identity in general.

It is perhaps more difficult to aſcertain with preciſion the meaning of perſonality; but it is not neceſſary in the preſent ſubject: It is ſufficient for our purpoſe to obſerve, that all mankind place their perſonality in ſomething that cannot be divided, or conſiſt of parts. A part of a perſon is a manifeſt abſurdity.

When a man loſes his eſtate, his health, his ſtrength, he is ſtill the ſame perſon, and has loſt nothing of his perſonality. If he has a leg or an arm cut off, he is the ſame perſon he was before. The amputated member is no part of his perſon, otherwiſe it would have a right to a part of his eſtate, and be liable for a part of his engagements: It would be entitled to a ſhare of his merit and demerit, which is manifeſtly abſurd. A perſon is ſomething indiviſible, and is what LEIBNITZ calls a *monad.*

My perſonal identity, therefore, implies the continued exiſtence of that indiviſible thing which I call myſelf. Whatever this ſelf may be, it is ſomething which thinks, and deliberates, and reſolves, and acts, and ſuffers. I am not thought, I am not action, I am not feeling; I am ſomething that thinks, and acts, and ſuffers. My thoughts, and actions, and feelings, change every moment; they have no continued, but a ſucceſſive exiſtence; but that *ſelf* or *I*, to which

they belong, is permanent, and has the ſame relation to all the ſucceeding thoughts, actions, and feelings, which I call mine.

Such are the notions that I have of my perſonal identity. But perhaps it may be ſaid, this may all be fancy without reality. How do you know; what evidence have you, that there is ſuch a permanent ſelf which has a claim to all the thoughts, actions, and feelings, which you call yours?

To this I anſwer, that the proper evidence I have of all this is remembrance. I remember that twenty years ago I converſed with ſuch a perſon; I remember ſeveral things that paſſed in that converſation; my memory teſtifies not only that this was done, but that it was done by me who now remember it: If it was done by me, I muſt have exiſted at that time, and continued to exiſt from that time to the preſent: If the identical perſon whom I call myſelf, had not a part in that converſation, my memory is fallacious; it gives a diſtinct and poſitive teſtimony of what is not true. Every man in his ſenſes believes what he diſtinctly remembers, and every thing he remembers convinces him that he exiſted at the time remembered.

Although memory gives the moſt irreſiſtible evidence of my being the identical perſon that did ſuch a thing, at ſuch a time, I may have other good evidence of things which befel me, and

and which I do not remember: I know who bare me, and ſuckled me, but I do not remember theſe events.

It may here be obſerved, (though the obſervation would have been unneceſſary, if ſome great Philoſophers had not contradicted it), that it is not my remembering any action of mine that makes me to be the perſon who did it. This remembrance makes me to know aſſuredly that I did it; but I might have done it, though I did not remember it. That relation to me, which is expreſſed by ſaying that I did it, would be the ſame, though I had not the leaſt remembrance of it. To ſay that my remembering that I did ſuch a thing, or, as ſome chooſe to expreſs it, my being conſcious that I did it, makes me to have done it, appears to me as great an abſurdity as it would be to ſay, that my belief that the world was created, made it to be created.

When we paſs judgment on the identity of other perſons beſides ourſelves, we proceed upon other grounds, and determine from a variety of circumſtances, which ſometimes produce the firmeſt aſſurance, and ſometimes leave room for doubt. The identity of perſons has often furniſhed matter of ſerious litigation before tribunals of juſtice. But no man of a ſound mind ever doubted of his own identity, as far as he diſtinctly remembered.

The identity of a perſon is a perfect identity; wherever it is real, it admits of no degrees; and it is impoſſible that a perſon ſhould be in part the ſame, and in part different; becauſe a perſon is a *monad*, and is not diviſible into parts. The evidence of identity in other perſons beſides ourſelves, does indeed admit of all degrees, from what we account certainty, to the leaſt degree of probability. But ſtill it is true, that the ſame perſon is perfectly the ſame, and cannot be ſo in part, or in ſome degree only.

For this cauſe, I have firſt conſidered perſonal identity, as that which is perfect in its kind, and the natural meaſure of that which is imperfect.

We probably at firſt derive our notion of identity from that natural conviction which every man has from the dawn of reaſon of his own identity and continued exiſtence. The operations of our minds are all ſucceſſive, and have no continued exiſtence. But the thinking being has a continued exiſtence, and we have an invincible belief, that it remains the ſame when all its thoughts and operations change.

Our judgments of the identity of objects of ſenſe ſeem to be formed much upon the ſame grounds as our judgments of the identity of other perſons beſides ourſelves.

Wherever we obſerve great ſimilarity, we are apt to preſume identity, if no reaſon appears to the

the contrary. Two objects ever ſo like, when they are perceived at the ſame time, cannot be the ſame: But if they are preſented to our ſenſes at different times, we are apt to think them the ſame, merely from their ſimilarity.

Whether this be a natural prejudice, or from whatever cauſe it proceeds, it certainly appears in children from infancy; and, when we grow up, it is confirmed in moſt inſtances by experience: For we rarely find two individuals of the ſame ſpecies that are not diſtinguiſhable by obvious differences.

A man challenges a thief whom he finds in poſſeſſion of his horſe or his watch, only on ſimilarity. When the watchmaker ſwears that he ſold this watch to ſuch a perſon, his teſtimony is grounded on ſimilarity. The teſtimony of witneſſes to the identity of a perſon is commonly grounded on no other evidence.

Thus it appears, that the evidence we have of our own identity, as far back as we remember, is totally of a different kind from the evidence we have of the identity of other perſons, or of objects of ſenſe. The firſt is grounded on memory, and gives undoubted certainty. The laſt is grounded on ſimilarity, and on other circumſtances, which in many caſes are not ſo deciſive as to leave no room for doubt.

It may likewiſe be obſerved, that the identity of objects of ſenſe is never perfect. All bodies,

as they consist of innumerable parts that may be disjoined from them by a great variety of causes, are subject to continual changes of their substance, increasing, diminishing, changing insensibly. When such alterations are gradual, because language could not afford a different name for every different state of such a changeable being, it retains the same name, and is considered as the same thing. Thus we say of an old regiment, that it did such a thing a century ago, though there now is not a man alive who then belonged to it. We say a tree is the same in the seed-bed and in the forest. A ship of war, which has successively changed her anchors, her tackle, her sails, her masts, her planks, and her timbers, while she keeps the same name, is the same.

The identity therefore which we ascribe to bodies, whether natural or artificial, is not perfect identity; it is rather something, which, for the conveniency of speech, we call identity. It admits of a great change of the subject, providing the change be gradual, sometimes even of a total change. And the changes which in common language are made consistent with identity, differ from those that are thought to destroy it, not in kind, but in number and degree. It has no fixed nature when applied to bodies; and questions about the identity of a body are very often questions about words. But identity, when applied

applied to perſons, has no ambiguity, and admits not of degrees, or of more and leſs: It is the foundation of all rights and obligations, and of all accountableneſs; and the notion of it is fixed and preciſe.

CHAP. V.

Mr LOCKE's *Account of the Origin of our Ideas, and particularly of the Idea of Duration.*

IT was a very laudable attempt of Mr LOCKE "to inquire into the original of thoſe ideas, "notions, or whatever you pleaſe to call them, "which a man obſerves, and is conſcious to him-"ſelf he has in his mind, and the ways where-"by the underſtanding comes to be furniſhed "with them." No man was better qualified for this inveſtigation; and I believe no man ever engaged in it with a more ſincere love of truth.

His ſucceſs, though great, would, I apprehend, have been greater, if he had not too early formed a ſyſtem or hypotheſis upon this ſubject, without all the caution and patient induction, which is neceſſary in drawing general concluſions from facts.

The ſum of his doctrine I take to be this, "That all our ideas or notions may be reduced

to two claſſes, the ſimple and the complex: That the ſimple are purely the work of Nature, the underſtanding being merely paſſive in receiving them: That they are all ſuggeſted by two powers of the mind, to wit, ſenſation and reflection; and that they are the materials of all our knowledge. That the other claſs of complex ideas are formed by the underſtanding itſelf, which being once ſtored with ſimple ideas of ſenſation and reflection, has the power to repeat, to compare, and to combine them even to an almoſt infinite variety, and ſo can make at pleaſure new complex ideas: But that it is not in the power of the moſt exalted wit, or enlarged underſtanding, by any quickneſs or variety of thought, to invent or frame one new ſimple idea in the mind, not taken in by the two ways before mentioned. That as our power over the material world reaches only to the compounding, dividing, and putting together, in various forms, the matter which God has made, but reaches not to the production or annihilation of a ſingle atom; ſo we may compound, compare, and abſtract the original and ſimple ideas which Nature has given us; but are unable to faſhion in our underſtanding any ſimple idea, not received in by our ſenſes from external objects, or by reflection from the operations of our own mind about them."

This

This account of the origin of all our ideas is adopted by Biſhop BERKELEY and Mr HUME; but ſome very ingenious Philoſophers, who have a high eſteem of LOCKE's Eſſay, are diſſatisfied with it.

Dr HUTCHINSON of Glaſgow, in his Enquiry into the Ideas of Beauty and Virtue, has endeavoured to ſhow that theſe are original and ſimple ideas, furniſhed by original powers, which he calls the ſenſe of beauty and the moral ſenſe.

Dr PRICE, in his Review of the Principal Queſtions and Difficulties in Morals, has obſerved very juſtly, that if we take the words *ſenſation* and *reflection*, as Mr LOCKE has defined them in the beginning of his excellent Eſſay, it will be impoſſible to derive ſome of the moſt important of our ideas from them; and that, by the underſtanding, that is by our judging and reaſoning power, we are furniſhed with many ſimple and original notions.

Mr LOCKE ſays, that, by reflection, he would be underſtood to mean "the notice which the "mind takes of its own operations, and the manner of them." This, I think, we commonly call conſciouſneſs; from which, indeed, we derive all the notions we have of the operations of our own minds; and he often ſpeaks of the operations of our own minds, as the only objects of reflection.

When

When reflection is taken in this confined ſenſe, to ſay, that all our ideas are ideas either of ſenſation or reflection, is to ſay, that every thing we can conceive is either ſome object of ſenſe, or ſome operation of our own minds, which is far from being true.

But the word reflection is commonly uſed in a much more extenſive ſenſe; it is applied to many operations of the mind, with more propriety than to that of conſciouſneſs. We reflect, when we remember, or call to mind what is paſt, and ſurvey it with attention. We reflect, when we define, when we diſtinguiſh, when we judge, when we reaſon, whether about things material or intellectual.

When reflection is taken in this ſenſe, which is more common, and therefore more proper than the ſenſe which Mr LOCKE has put upon it, it may be juſtly ſaid to be the only ſource of all our diſtinct and accurate notions of things. For, although our firſt notions of material things are got by the external ſenſes, and our firſt notions of the operations of our own minds by conſciouſneſs, theſe firſt notions are neither ſimple nor clear. Our ſenſes and our conſciouſneſs are continually ſhifting from one object to another; their operations are tranſient and momentory, and leave no diſtinct notion of their objects, until they are recalled by memory, examined

mined with attention, and compared with other things.

This reflection is not one power of the mind; it comprehends many; ſuch as recollection, attention, diſtinguiſhing, comparing, judging. By theſe powers our minds are furniſhed not only with many ſimple and original notions, but with all our notions, which are accurate and well defined, and which alone are the proper materials of reaſoning. Many of theſe, are neither notions of the objects of ſenſe, nor of the operations of our own minds, and therefore neither ideas of ſenſation, nor of reflection, in the ſenſe that Mr LOCKE gives to reflection. But if any one chooſes to call them ideas of reflection, taking the word in the more common and proper ſenſe, I have no objection.

Mr LOCKE ſeems to me to have uſed the word reflection ſometimes in that limited ſenſe which he has given to it in the definition before mentioned, and ſometimes to have fallen unawares into the common ſenſe of the word; and by this ambiguity his account of the origin of our ideas is darkened and perplexed.

Having premiſed theſe things in general of Mr LOCKE's theory of the origin of our ideas or notions, I proceed to ſome obſervations on his account of the idea of duration.

"Reflection, he ſays, upon the train of ideas, "which appear one after another in our minds,

"is

" is that which furniſhes us with the idea of ſuc-
" ceſſion; and the diſtance between any two
" parts of that ſucceſſion, is that we call du-
" ration."

If it be meant that the idea of ſucceſſion is prior to that of duration, either in time, or in the order of nature, this, I think, is impoſſible, becauſe ſucceſſion, as Dr PRICE juſtly obſerves, preſuppoſes duration, and can in no ſenſe be prior to it; and therefore it would be more proper to derive the idea of ſucceſſion from that of duration.

But how do we get the idea of ſucceſſion? It is, ſays he, by reflecting upon the train of ideas, which appear one after another in our minds.

Reflecting upon the train of ideas can be nothing but remembering it, and giving attention to what our memory teſtifies concerning it; for if we did not remember it, we could not have a thought about it. So that it is evident that this reflection includes remembrance, without which there could be no reflection on what is paſt, and conſequently no idea of ſucceſſion.

It may here be obſerved, that if we ſpeak ſtrictly and philoſophically, no kind of ſucceſſion can be an object either of the ſenſes, or of conſciouſneſs; becauſe the operations of both are confined to the preſent point of time, and there can be no ſucceſſion in a point of time; and on that account the motion of a body, which

is

is a ſucceſſive change of place, could not be obſerved by the ſenſes alone without the aid of memory.

As this obſervation ſeems to contradict the common ſenſe and common language of mankind, when they affirm that they ſee a body move, and hold motion to be an object of the ſenſes, it is proper to take notice, that this contradiction between the Philoſopher and the vulgar is apparent only, and not real. It ariſes from this, that Philoſophers and the vulgar differ in the meaning they put upon what is called the *preſent* time, and are thereby led to make a different limit between ſenſe and memory.

Philoſophers give the name of the *preſent* to that indiviſible point of time, which divides the future from the paſt: But the vulgar find it more convenient in the affairs of life, to give the name of *preſent* to a portion of time, which extends more or leſs, according to circumſtances, into the paſt or the future. Hence we ſay, the preſent hour, the preſent year, the preſent century, though one point only of theſe periods can be preſent in the philoſophical ſenſe.

It has been obſerved by Grammarians, that the preſent tenſe in verbs is not confined to an indiviſible point of time, but is ſo far extended as to have a beginning, a middle, and an end; and that in the moſt copious and accurate languages, theſe

theſe different parts of the preſent are diſtinguiſhed by different forms of the verb.

As the purpoſes of converſation make it convenient to extend what is called the preſent, the ſame reaſon leads men to extend the province of ſenſe, and to carry its limit as far back as they carry the preſent. Thus a man may ſay, I ſaw ſuch a perſon juſt now; it would be ridiculous to find fault with this way of ſpeaking, becauſe it is authoriſed by cuſtom, and has a diſtinct meaning: But if we ſpeak philoſophically, the ſenſes do not teſtify what we ſaw, but only what we ſee; what I ſaw laſt moment I conſider as the teſtimony of ſenſe, though it is now only the teſtimony of memory.

There is no neceſſity in common life of dividing accurately the provinces of ſenſe and of memory; and therefore we aſſign to ſenſe, not an indiviſible point of time, but that ſmall portion of time which we call the preſent, which has a beginning, a middle, and an end.

Hence it is eaſy to ſee, that though in common language we ſpeak with perfect propriety and truth, when we ſay, that we ſee a body move, and that motion is an object of ſenſe, yet when as Philoſophers we diſtinguiſh accurately the province of ſenſe from that of memory, we can no more ſee what is paſt, though but a moment ago, than we can remember what is preſent; ſo that ſpeaking philoſophically, it is only by the aid

aid of memory that we diſcern motion, or any ſucceſſion whatſoever: We ſee the preſent place of the body; we remember the ſucceſſive advance it made to that place: The firſt can then only give us a conception of motion, when joined to the laſt.

Having conſidered the account given by Mr LOCKE, of the idea of ſucceſſion, we ſhall next conſider how, from the idea of ſucceſſion, he derives the idea of duration.

"The diſtance, he ſays, between any parts of "that ſucceſſion, or between the appearance of "any two ideas in our minds, is that we call du-"ration."

To conceive this the more diſtinctly, let us call the diſtance between an idea and that which immediately ſucceeds it, one element of duration; the diſtance between an idea and the ſecond that ſucceeds it, two elements, and ſo on: If ten ſuch elements make duration, then one muſt make duration, otherwiſe duration muſt be made up of parts that have no duration, which is impoſſible.

For, ſuppoſe a ſucceſſion of as many ideas as you pleaſe, if none of theſe ideas have duration, nor any interval of duration be between one and another, then it is perfectly evident there can be no interval of duration between the firſt and the laſt, how great ſoever their number be. I conclude

clude therefore, that there muſt be duration in every ſingle interval or element of which the whole duration is made up. Nothing indeed is more certain than that every elementary part of duration muſt have duration, as every elementary part of extenſion muſt have extenſion.

Now it muſt be obſerved, that in theſe elements of duration, or ſingle intervals of ſucceſſive ideas, there is no ſucceſſion of ideas, yet we muſt conceive them to have duration; whence we may conclude with certainty, that there is a conception of duration, where there is no ſucceſſion of ideas in the mind.

We may meaſure duration by the ſucceſſion of thoughts in the mind, as we meaſure length by inches or feet; but the notion or idea of duration muſt be antecedent to the menſuration of it, as the notion of length is antecedent to its being meaſured.

Mr Locke draws ſome concluſions from his account of the idea of duration, which may ſerve as a touchſtone to diſcover how far it is genuine. One is, that if it were poſſible for a man awake, to keep only one idea in his mind without variation, or the ſucceſſion of others, he would have no perception of duration at all; and the moment he began to have this idea, would ſeem to have no diſtance from the moment he ceaſed to have it.

Now

Now that one idea ſhould ſeem to have no duration, and that a multiplication of that *no duration* ſhould ſeem to have duration, appears to me as impoſſible as that the multiplication of nothing ſhould produce ſomething.

Another concluſion which the author draws from this theory is, that the ſame period of duration appears long to us, when the ſucceſſion of ideas in our mind is quick, and ſhort when the ſucceſſion is ſlow.

There can be no doubt but the ſame length of duration appears in ſome circumſtances much longer than in others; the time appears long when a man is impatient under any pain or diſtreſs, or when he is eager in the expectation of ſome happineſs: On the other hand, when he is pleaſed and happy in agreeable converſation, or delighted with a variety of agreeable objects that ſtrike his ſenſes, or his imagination, time flies away, and appears ſhort.

According to Mr LOCKE's theory, in the firſt of theſe caſes, the ſucceſſion of ideas is very quick, and in the laſt very ſlow: I am rather inclined to think that the very contrary is the truth. When a man is racked with pain, or with expectation, he can hardly think of any thing but his diſtreſs; and the more his mind is occupied by that ſole object, the longer the time appears. On the other hand, when he is entertained with cheerful muſic, with lively converſation, and briſk ſallies of wit, there ſeems to be

the quickeſt ſucceſſion of ideas, but the time appears ſhorteſt.

I have heard a military officer, a man of candour and obſervation, ſay, that the time he was engaged in hot action always appeared to him much ſhorter than it really was. Yet I think it cannot be ſuppoſed, that the ſucceſſion of ideas was then ſlower than uſual.

If the idea of duration were got merely by the ſucceſſion of ideas in our minds, that ſucceſſion muſt to ourſelves appear equally quick at all times, becauſe the only meaſure of duration is the number of ſucceeding ideas; but I believe every man capable of reflection will be ſenſible, that at one time his thoughts come ſlowly and heavily, and at another time have a much quicker and livelier motion.

I know of no ideas or notions that have a better claim to be accounted ſimple and original than thoſe of ſpace and time. It is eſſential both to ſpace and time to be made up of parts, but every part is ſimilar to the whole, and of the ſame nature. Different parts of ſpace, as it has three dimenſions, may differ both in figure and in magnitude; but time having only one dimenſion, its parts can differ only in magnitude; and, as it is one of the ſimpleſt objects of thought, the conception of it muſt be purely the effect of our conſtitution, and given us by ſome original power of the mind.

The

The ſenſe of ſeeing, by itſelf, gives us the conception and belief of only two dimenſions of extenſion, but the ſenſe of touch diſcovers three; and reaſon, from the contemplation of finite extended things, leads us neceſſarily to the belief of an immenſity that contains them. In like manner, memory gives us the conception and belief of finite intervals of duration. From the contemplation of theſe, reaſon leads us neceſſarily to the belief of an eternity, which comprehends all things that have a beginning and end. Our conceptions, both of ſpace and time, are probably partial and inadequate, and therefore we are apt to loſe ourſelves, and to be embarraſſed in our reaſonings about them.

Our underſtanding is no leſs puzzled when we conſider the minuteſt parts of time and ſpace than when we conſider the whole. We are forced to acknowledge, that in their nature they are diviſible without end or limit; but there are limits beyond which our faculties can divide neither the one nor the other.

It may be determined by experiment, what is the leaſt angle under which an object may be diſcerned by the eye, and what is the leaſt interval of duration that may be diſcerned by the ear. I believe theſe may be different in different perſons: But ſurely there is a limit which no man can exceed: And what our faculties can no longer divide is ſtill diviſible in itſelf, and, by

beings of ſuperior perfection, may be divided into minuter parts.

I have reaſon to believe, that a good eye in the prime of life may ſee an object under an angle not exceeding half a minute of a degree, and I believe there are ſome human eyes ſtill more perfect. But even this degree of perfection will appear great, if we conſider how ſmall a part of the retina of the eye it muſt be which ſubtends an angle of half a minute.

Suppoſing the diſtance between the centre of the eye and the retina to be ſix or ſeven tenths of an inch, the ſubtenſe of an angle of half a minute to that radius, or the breadth of the image of an object ſeen under that angle, will not be above the ten thouſandth part of an inch. This ſhews ſuch a wonderful degree of accuracy in the refracting power of a good eye, that a pencil of rays coming from one point of the object ſhall meet in one point of the retina, ſo as not to deviate from that point the ten thouſandth part of an inch. It ſhews, likewiſe, that ſuch a motion of an object as makes its image on the retina to move the ten thouſandth part of an inch, is diſcernible by the mind.

In order to judge to what degree of accuracy we can meaſure ſhort intervals of time, it may be obſerved, that one who has given attention to the motion of a Second pendulum, will be able to beat ſeconds for a minute with a very ſmall error.

error. When he continues this exerciſe long, as for five or ten minutes, he is apt to err, more even than in proportion to the time, for this reaſon, as I apprehend, that it is difficult to attend long to the moments as they paſs, without wandering after ſome other object of thought.

I have found, by ſome experiments, that a man may beat ſeconds for one minute, without erring above one ſecond in the whole ſixty; and I doubt not but by long practice he might do it ſtill more accurately. From this I think it follows, that the ſixtieth part of a ſecond of time is diſcernible by the human mind.

CHAP. VI.

Of Mr LOCKE's *Account of our perſonal Identity.*

IN a long chapter upon identity and diverſity, Mr LOCKE has made many ingenious and juſt obſervations, and ſome which I think cannot be defended. I ſhall only take notice of the account he gives of our own perſonal identity. His doctrine upon this ſubject has been cenſured by Biſhop BUTLER, in a ſhort eſſay ſubjoined to his Analogy, with whoſe ſentiments I perfectly agree.

Identity, as was obſerved chap. 4. of this Eſſay, ſuppoſes the continued exiſtence of the be-

ing of which it is affirmed, and therefore can be applied only to things which have a continued exiſtence. While any being continues to exiſt, it is the ſame being; but two beings which have a different beginning or a different ending of their exiſtence, cannot poſſibly be the ſame. To this I think Mr LOCKE agrees.

He obſerves very juſtly, that to know what is meant by the ſame perſon, we muſt conſider what the word *perſon* ſtands for; and he defines a perſon to be an intelligent being, endowed with reaſon and with conſciouſneſs, which laſt he thinks inſeparable from thought.

From this definition of a perſon, it muſt neceſſarily follow, that while the intelligent being continues to exiſt and to be intelligent, it muſt be the ſame perſon. To ſay that the intelligent being is the perſon, and yet that the perſon ceaſes to exiſt, while the intelligent being continues, or that the perſon continues while the intelligent being ceaſes to exiſt, is to my apprehenſion a manifeſt contradiction.

One would think that the definition of a perſon ſhould perfectly aſcertain the nature of perſonal identity, or wherein it conſiſts, though it might ſtill be a queſtion how we come to know and be aſſured of our perſonal identity.

Mr LOCKE tells us however, "that perſonal "identity, that is, the ſameneſs of a rational being,

" being, conſiſts in conſciouſneſs alone, and, as " far as this conſciouſneſs can be extended back- " wards to any paſt action or thought, ſo far " reaches the identity of that perſon. So that " whatever hath the conſciouſneſs of preſent and " paſt actions, is the ſame perſon to whom they " belong."

This doctrine hath ſome ſtrange conſequences, which the author was aware of. Such as, that if the ſame conſciouſneſs can be transferred from one intelligent being to another, which he thinks we cannot ſhew to be impoſſible, then two or twenty intelligent beings may be the ſame perſon. And if the intelligent being may loſe the conſciouſneſs of the actions done by him, which ſurely is poſſible, then he is not the perſon that did thoſe actions; ſo that one intelligent being may be two or twenty different perſons, if he ſhall ſo often loſe the conſciouſneſs of his former actions.

There is another conſequence of this doctrine, which follows no leſs neceſſarily, though Mr LOCKE probably did not ſee it. It is, that a man may be, and at the ſame not be, the perſon that did a particular action.

Suppoſe a brave officer to have been flogged when a boy at ſchool, for robbing an orchard, to have taken a ſtandard from the enemy in his firſt campaign, and to have been made a general in advanced life: Suppoſe alſo, which muſt be

admitted to be poſſible, that when he took the ſtandard, he was conſcious of his having been flogged at ſchool, and that when made a general, he was conſcious of his taking the ſtandard, but had abſolutely loſt the conſciouſneſs of his flogging.

Theſe things being ſuppoſed, it follows, from Mr LOCKE's doctrine, that he who was flogged at ſchool is the ſame perſon who took the ſtandard, and that he who took the ſtandard is the ſame perſon who was made a general. Whence it follows, if there be any truth in logic, that the general is the ſame perſon with him who was flogged at ſchool. But the general's conſciouſneſs does not reach ſo far back as his flogging, therefore, according to Mr LOCKE's doctrine, he is not the perſon who was flogged. Therefore the general is, and at the ſame time is not the ſame perſon with him who was flogged at ſchool.

Leaving the conſequences of this doctrine to thoſe who have leiſure to trace them, we may obſerve, with regard to the doctrine itſelf,

Firſt, That Mr LOCKE attributes to conſciouſneſs the conviction we have of our paſt actions, as if a man may now be conſcious of what he did twenty years ago. It is impoſſible to underſtand the meaning of this, unleſs by conſciouſneſs be meant memory, the only faculty by which

which we have an immediate knowledge of our paſt actions.

Sometimes, in popular diſcourſe, a man ſays he is conſcious that he did ſuch a thing, meaning that he diſtinctly remembers that he did it. It is unneceſſary, in common diſcourſe, to fix accurately the limits between conſciouſneſs and memory. This was formerly ſhewn to be the caſe with regard to ſenſe and memory: And therefore diſtinct remembrance is ſometimes called ſenſe, ſometimes conſciouſneſs, without any inconvenience.

But this ought to be avoided in philoſophy, otherwiſe we confound the different powers of the mind, and aſcribe to one what really belongs to another. If a man can be conſcious of what he did twenty years or twenty minutes ago, there is no uſe for memory, nor ought we to allow that there is any ſuch faculty. The faculties of conſciouſneſs and memory are chiefly diſtinguiſhed by this, that the firſt is an immediate knowledge of the preſent, the ſecond an immediate knowledge of the paſt.

When, therefore, Mr LOCKE's notion of perſonal identity is properly expreſſed, it is, that perſonaly identity conſiſts in diſtinct remembrance: For, even in the popular ſenſe, to ſay that I am conſcious of a paſt action, means nothing elſe than that I diſtinctly remember that I did it.

Secondly.

Secondly, It may be obſerved, that, in this doctrine, not only is conſciouſneſs confounded with memory, but, which is ſtill more ſtrange, perſonal identity is confounded with the evidence which we have of our perſonal identity.

It is very true, that my remembrance that I did ſuch a thing is the evidence I have that I am the identical perſon who did it. And this, I am apt to think, Mr LOCKE meant: But to ſay that my remembrance that I did ſuch a thing, or my conſciouſneſs, makes me the perſon who did it, is, in my apprehenſion, an abſurdity too groſs to be entertained by any man who attends to the meaning of it: For it is to attribute to memory or conſciouſneſs a ſtrange magical power of producing its object, though that object muſt have exiſted before the memory or conſciouſneſs which produced it.

Conſciouſneſs is the teſtimony of one faculty; memory is the teſtimony of another faculty: And to ſay that the teſtimony is the cauſe of the thing teſtified, this ſurely is abſurd, if any thing be, and could not have been ſaid by Mr LOCKE, if he had not confounded the teſtimony with the thing teſtified.

When a horſe that was ſtolen is found and claimed by the owner, the only evidence he can have, or that a judge or witneſſes can have, that this is the very identical horſe which was his property, is ſimilitude. But would it not be ridiculous

ridiculous from this to infer that the identity of a horſe conſiſts in ſimilitude only? The only evidence I have that I am the identical perſon who did ſuch actions is, that I remember diſtinctly I did them; or, as Mr LOCKE expreſſes it, I am conſcious I did them. To infer from this, that perſonal identity conſiſts in conſciouſneſs, is an argument, which, if it had any force, would prove the identity of a ſtolen horſe to conſiſt ſolely in ſimilitude.

Thirdly, Is it not ſtrange that the ſameneſs or identity of a perſon ſhould conſiſt in a thing which is continually changing, and is not any two minutes the ſame?

Our conſciouſneſs, our memory, and every operation of the mind, are ſtill flowing like the water of a river, or like time itſelf. The conſciouſneſs I have this moment, can no more be the ſame conſciouſneſs I had laſt moment, than this moment can be the laſt moment. Identity can only be affirmed of things which have a continued exiſtence. Conſciouſneſs, and every kind of thought, is tranſient and momentary, and has no continued exiſtence; and therefore, if perſonal identity conſiſted in conſciouſneſs, it would certainly follow, that no man is the ſame perſon any two moments of his life; and as the right and juſtice of reward and puniſhment is founded on perſonal identity, no man could be reſponſible for his actions.

But

But though I take this to be the unavoidable conſequence of Mr LOCKE's doctrine concerning perſonal identity, and though ſome perſons may have liked the doctrine the better on this account, I am far from imputing any thing of this kind to Mr LOCKE. He was too good a man not to have rejected with abhorrence a doctrine which he believed to draw this conſequence after it.

Fourthly, There are many expreſſions uſed by Mr LOCKE in ſpeaking of perſonal identity, which to me are altogether unintelligible, unleſs we ſuppoſe that he confounded that ſameneſs or identity, which we abſcribe to an individual, with the identity which in common diſcourſe is often aſcribed to many idividuals of the ſame ſpecies.

When we ſay that pain and pleaſure, conſciouſneſs and memory, are the ſame in all men, this ſameneſs can only mean ſimilarity, or ſameneſs of kind; but that the pain of one man can be the ſame individual pain with that of another man, is no leſs impoſſible than that one man ſhould be another man; the pain felt by me yeſterday, can no more be the pain I feel to-day, than yeſterday can be this day; and the ſame thing may be ſaid of every paſſion and of every operation of the mind: The ſame kind or ſpecies of operation may be in different men, or in the ſame man at different times; but it is impoſſible

poſſible that the ſame individual operation ſhould be in different men, or in the ſame man at different times.

When Mr LOCKE therefore ſpeaks of "the "ſame conſciouſneſs being continued through a "ſucceſſion of different ſubſtances;" when he ſpeaks of "repeating the idea of a paſt action, "with the ſame conſciouſneſs we had of it at the "firſt," and of "the ſame conſciouſneſs extend-"ing to actions paſt and to come;" theſe expreſſions are to me unintelligible, unleſs he means not the ſame individual conſciouſneſs, but a conſciouſneſs that is ſimilar, or of the ſame kind.

If our perſonal identity conſiſts in conſciouſneſs, as this conſciouſneſs cannot be the ſame individually any two moments, but only of the ſame kind, it would follow, that we are not for any two moments the ſame individual perſons, but the ſame kind of perſons.

As our conſciouſneſs ſometimes ceaſes to exiſt, as in found ſleep, our perſonal identity muſt ceaſe with it. Mr LOCKE allows, that the ſame thing cannot have two beginnings of exiſtence, ſo that our identity would be irrecoverably gone every time we ceaſe to think, if it was but for a moment.

CHAP.

CHAP. VII.

Theories concerning Memory.

THE common theory of ideas, that is of images in the brain or in the mind, of all the objects of thought, has been very generally applied to account for the faculties of memory and imagination, as well as that of perception by the ſenſes.

The ſentiments of the Peripatetics are expreſſed by ALEXANDER APHRODISIENSIS, one of the earlieſt Greek Commentators on ARISTOTLE, in theſe words, as they are tranſlated by Mr HARRIS in his Hermes, "Now what fancy or imagination is, we may explain as follows: We may conceive to be formed within us, from the operations of our ſenſes about ſenſible objects, ſome impreſſion, as it were, or picture in our original ſenſorium, being a relict of that motion cauſed within us by the external object; a relict, which when the external object is no longer preſent, remains, and is ſtill preſerved, being as it were its image, and which, by being thus preſerved, becomes the cauſe of our having memory: Now ſuch a ſort of relict, and as it were impreſſion, they call fancy or imagination."

Another

Another paſſage from ALCINOUS *of the doctrines of* PLATO, chap. 4. ſhews the agreement of the ancient Platoniſts and Peripatetics in this theory, "When the form or type of things is "imprinted on the mind by the organs of the "ſenſes, and ſo imprinted as not to be deleted "by time, but preſerved firm and laſting, its "preſervation is called memory."

Upon this principle ARISTOTLE imputes the ſhortneſs of memory in children to this cauſe, that their brain is too moiſt and ſoft to retain impreſſions made upon it: And the defect of memory in old men he imputes, on the contrary, to the hardneſs and rigidity of the brain, which hinders its receiving any durable impreſſion.

This ancient theory of the cauſe of memory is defective in two reſpects: *Firſt*, If the cauſe aſſigned did really exiſt, it by no means accounts for the phænomenon: And, *ſecondly*, There is no evidence, nor even probability, that that cauſe exiſts.

It is probable, that in perception ſome impreſſion is made upon the brain as well as upon the organ and nerves, becauſe all the nerves terminate in the brain, and becauſe diſorders and hurts of the brain are found to affect our powers of perception when the external organ and nerve are ſound; but we are totally ignorant of the nature of this impreſſion upon the brain: It can have no reſemblance to the object perceived, nor

nor does it in any degree account for that ſenſation and perception which are conſequent upon it. Theſe things have been argued in the ſecond Eſſay, and ſhall now be taken for granted, to prevent repetition.

If the impreſſion upon the brain be inſufficient to account for the perception of objects that are preſent, it can as little account for the memory of thoſe that are paſt.

So that if it were certain, that the impreſſions made on the brain in perception remain as long as there is any memory of the object; all that could be inferred from this is, that, by the laws of Nature, there is a connection eſtabliſhed between that impreſſion, and the remembrance of that object. But how the impreſſion contributes to this remembrance, we ſhould be quite ignorant; it being impoſſible to diſcover how thought of any kind ſhould be produced, by an impreſſion on the brain, or upon any part of the body.

To ſay that this impreſſion is memory, is abſurd, if underſtood literally. If it is only meant that it is the cauſe of memory, it ought to be ſhown how it produces this effect, otherwiſe memory remains as unaccountable as before.

If a Philoſopher ſhould undertake to account for the force of gunpowder, in the diſcharge of a muſket, and then tell us gravely, that the cauſe of this phænomenon is the drawing of the trigger, we ſhould not be much wiſer by this account

count. As little are we inſtructed in the cauſe of memory, by being told that it is cauſed by a certain impreſſion on the brain. For ſuppoſing, that impreſſion on the brain were as neceſſary to memory as the drawing of the trigger is to the diſcharge of the muſket, we are ſtill as ignorant as we were how memory is produced; ſo that, if the cauſe of memory, aſſigned by this theory, did really exiſt, it does not in any degree account for memory.

Another defect in this theory is, that there is no evidence, nor probability that the cauſe aſſigned does exiſt; that is, that the impreſſion made upon the brain in perception remains after the object is removed.

That impreſſion, whatever be its nature, is cauſed by the impreſſion made by the object upon the organ of ſenſe, and upon the nerve. Philoſophers ſuppoſe, without any evidence, that when the object is removed, and the impreſſion upon the organ and nerve ceaſes, the impreſſion upon the brain continues, and is permanent; that is, that when the cauſe is removed the effect continues. The brain ſurely does not appear more fitted to retain an impreſſion than the organ and nerve.

But granting that the impreſſion upon the brain continues after its cauſe is removed, its effects ought to continue while it continues; that is, the ſenſation and perception ſhould be as per-

manent as the impreſſion upon the brain, which is ſuppoſed to be their cauſe. But here again the Philoſopher makes a ſecond ſuppoſition, with as little evidence, but of a contrary nature, to wit, that, while the cauſe remains, the effect ceaſes.

If this ſhould be granted alſo, a third muſt be made, That the ſame cauſe, which at firſt produced ſenſation and perception, does afterwards produce memory; an operation eſſentially different, both from ſenſation and perception.

A fourth ſuppoſition muſt be made, That this cauſe, though it be permanent, does not produce its effect at all times; it muſt be like an inſcription which is ſometimes covered with rubbiſh, and on other occaſions made legible: For the memory of things is often interrupted for a long time, and circumſtances bring to our recollection what had been long forgot. After all, many things are remembered which were never perceived by the ſenſes, being no objects of ſenſe, and therefore, which could make no impreſſion upon the brain by means of the ſenſes.

Thus, when Philoſophers have piled one ſuppoſition upon another, as the giants piled the mountains, in order to ſcale the heavens, all is to no purpoſe, memory remains unaccountable; and we know as little how we remember things paſt, as how we are conſcious of the preſent.

But

But here, it is proper to obſerve, that although impreſſions upon the brain give no aid in accounting for memory, yet it is very probable, that, in the human frame, memory is dependent on ſome proper ſtate or temperament of the brain.

Although the furniture of our memory bears no reſemblance to any temperament of brain whatſoever, as indeed it is impoſſible it ſhould; yet Nature may have ſubjected us to this law, that a certain conſtitution or ſtate of the brain is neceſſary to memory. That this is really the caſe, many well known facts lead us to conclude.

It is poſſible, that, by accurate obſervation, the proper means may be diſcovered of preſerving that temperament of the brain which is favourable to memory, and of remedying the diſorders of that temperament. This would be a very noble improvement of the medical art. But if it ſhould ever be attained, it would give no aid to underſtand how one ſtate of the brain aſſiſts memory, and another hurts it.

I know certainly, that the impreſſion made upon my hand by the prick of a pin occaſions acute pain. But can any Philoſopher ſhow how this cauſe produces the effect? The nature of the impreſſion is here perfectly known; but it gives no help to underſtand how that impreſſion affects the mind; and if we knew as diſtinctly

that ſtate of the brain which cauſes memory, we ſhould ſtill be as ignorant as before how that ſtate contributes to memory. We might have been ſo conſtituted, for any thing that I know, that the prick of a pin in the hand, inſtead of cauſing pain, ſhould cauſe remembrance; nor would that conſtitution be more unaccountable than the preſent.

The body and mind operate on each other, according to fixed laws of Nature; and it is the buſineſs of a Philoſopher to diſcover thoſe laws by obſervation and experiment: But, when he has diſcovered them, he muſt reſt in them as facts, whoſe cauſe is inſcrutable to the human underſtanding.

Mr LOCKE, and thoſe who have followed him, ſpeak with more reſerve than the ancients, and only incidentally, of impreſſions on the brain as the cauſe of memory, and impute it rather to our retaining in our minds the ideas, got either by ſenſation or reflection.

This, Mr LOCKE ſays, may be done two ways; "*Firſt*, By keeping the idea for ſome "time actually in view, which is called *contem-* "*plation*. *Secondly*, By the power to revive "again in our minds thoſe ideas, which, after "imprinting, have diſappeared, or have been, "as it were, laid out of ſight; and this is me- "mory, which is, as it were, the ſtorehouſe of "our ideas."

To

To explain this more diſtinctly, he immediately adds the following obſervation: "But "our ideas being nothing but actual perceptions "in the mind, which ceaſe to be any thing, "when there is no perception of them, this lay-"ing up of our ideas in the repoſitory of the "memory, ſignifies no more but this, that the "mind has a power, in many caſes, to revive "perceptions which it once had, with this ad-"ditional perception annexed to them, that it "has had them before; and in this ſenſe it is, "that our ideas are ſaid to be in our memories, "when indeed they are actually no where; but "only there is an ability in the mind, when it "will, to revive them again, and, as it were, "paint them anew upon itſelf, though ſome "with more, ſome with leſs, difficulty, ſome "more lively, and others more obſcurely."

In this account of memory, the repeated uſe of the phraſe, *as it were*, leads one to judge that it is partly figurative; we muſt therefore endeavour to diſtinguiſh the figurative part from the philoſophical. The firſt being addreſſed to the imagination, exhibits a picture of memory, which, to have its effect, muſt be viewed at a proper diſtance, and from a particular point of view. The ſecond being addreſſed to the underſtanding, ought to bear a near inſpection, and a critical examination.

The analogy between memory and a repoſitory, and between remembring and retaning, is obvious, and is to be found in all languages, it being very natural to expreſs the operations of the mind by images taken from things material. But in philoſophy we ought to draw aſide the veil of imagery, and to view them naked.

When therefore memory is ſaid to be a repoſitory or ſtorehouſe of ideas, where they are laid up when not perceived, and again brought forth as there is occaſion, I take this to be popular and rhetorical. For the author tells us, that when they are not perceived, they are nothing, and no where, and therefore can neither be laid up in a repoſitory, nor drawn out of it.

But we are told, "That this laying up of our "ideas in the repoſitory of the memory ſigni- "fies no more than this, that the mind has a "power to revive perceptions, which it once "had, with this additional perception annexed "to them, that it has had them before." This, I think, muſt be underſtood literally and philoſophically.

But it ſeems to me as difficult to revive things that have ceaſed to be any thing, as to lay them up in a repoſitory, or to bring them out of it. When a thing is once annihilated, the ſame thing cannot be again produced, though another thing ſimilar to it may. Mr LOCKE, in another place, acknowledges, that the ſame

ſame thing cannot have two beginnings of exiſtence; and that things that have different beginnings are not the ſame, but diverſe. From this it follows, that an ability to revive our ideas or perceptions, after they have ceaſed to be, can ſignify no more but an ability to create new ideas or perceptions ſimilar to thoſe we had before.

They are ſaid "to be revived, with this additional perception, that we have had them "before." This, ſurely, would be a fallacious perception, ſince they could not have two beginnings of exiſtence; nor could we believe them to have two beginnings of exiſtence. We can only believe, that we had formerly ideas or perceptions very like to them, though not identically the ſame. But whether we perceive them to be the ſame, or only like to thoſe we had before, this perception, one would think, ſuppoſes a remembrance of thoſe we had before, otherwiſe the ſimilitude or identity could not be perceived.

Another phraſe is uſed to explain this reviving of our perceptions. "The mind, as it "were, paints them anew upon itſelf." There may be ſomething figurative in this; but making due allowance for that, it muſt imply, that the mind, which paints the things that have ceaſed to exiſt, muſt have the memory of what they were, ſince every painter muſt have a copy

either before his eye, or in his imagination and memory.

Theſe remarks upon Mr LOCKE's account of memory are intended to ſhow, that his ſyſtem of ideas gives no light to this faculty, but rather tends to darken it; as little does it make us underſtand how we remember, and by that means have the certain knowledge of things paſt.

Every man knows what memory is, and has a diſtinct notion of it: But when Mr LOCKE ſpeaks of a power to revive in the mind thoſe ideas, which, after imprinting, have diſappeared, or have been, as it were, laid out of ſight, one would hardly know this to be memory, if he had not told us. There are other things which it ſeems to reſemble at leaſt as much. I ſee before me the picture of a friend. I ſhut my eyes, or turn them another way; and the picture diſappears, or is, as it were, laid out of ſight. I have a power to turn my eyes again towards the picture, and immediately the perception is revived. But is this memory? no ſurely; yet it anſwers the definition as well as memory itſelf can do.

We may obſerve, that the word perception is uſed by Mr LOCKE in too indefinite a way, as well as the word idea.

Perception, in the chapter upon that ſubject, is ſaid to be the firſt faculty of the mind exerciſed about our ideas. Here we are told, that ideas

ideas are nothing but perceptions: Yet I apprehend it would ſound oddly to ſay, that perception is the firſt faculty of the mind exerciſed about perception; and ſtill more ſtrangely to ſay, that ideas are the firſt faculty of the mind exerciſed about our ideas. But why ſhould not ideas be a faculty as well as perception, if both are the ſame?

Memory is ſaid to be a power to revive our perceptions. Will it not follow from this, that every thing that can be remembered is a perception? If this be ſo, it will be difficult to find any thing in nature but perceptions.

Our ideas, we are told, are nothing but actual perceptions; but in many places of the Eſſay, ideas are ſaid to be the objects of perception, and that the mind, in all its thoughts and reaſonings, has no other immediate object which it does or can contemplate but its own ideas. Does it not appear from this, either that Mr LOCKE held the operations of the mind to be the ſame thing with the objects of thoſe operations, or that he uſed the word idea ſometimes in one ſenſe and ſometimes in another, without any intimation, and probably without any apprehenſion of its ambiguity? It is an article of Mr HUME's philoſophy, that there is no diſtinction between the operations of the mind and their objects. But I ſee no reaſon to impute this opinion to Mr LOCKE. I rather think, that, notwithſtanding his great judgment

judgment and candour, his underſtanding was entangled by the ambiguity of the word idea, and that moſt of the imperfections of his Eſſay are owing to that cauſe.

Mr HUME ſaw farther into the conſequences of the common ſyſtem concerning ideas than any author had done before him. He ſaw the abſurdity of making every object of thought double, and ſplitting it into a remote object, which has a ſeparate and permanent exiſtence, and an immediate object, called an idea or impreſſion, which is an image of the former, and has no exiſtence, but when we are conſcious of it. According to this ſyſtem, we have no intercourſe with the external world, but by means of the internal world of ideas, which repreſents the other to the mind.

He ſaw it was neceſſary to reject one of theſe worlds as a fiction, and the queſtion was, Which ſhould be rejected? Whether all mankind, learned and unlearned, had feigned the exiſtence of the external world without good reaſon? or whether Philoſophers had feigned the internal world of ideas, in order to account for the intercourſe of the mind with the external? Mr HUME adopted the firſt of theſe opinions, and employed his reaſon and eloquence in ſupport of it.

Biſhop BERKELEY had gone ſo far in the ſame track as to reject the material world as fictitious; but

but it was left to Mr HUME to complete the ſyſtem.

According to his ſyſtem, therefore, impreſſions and ideas in his own mind are the only things a man can know, or can conceive: Nor are theſe ideas repreſentatives, as they were in the old ſyſtem. There is nothing elſe in nature, or at leaſt within the reach of our faculties, to be repreſented. What the vulgar call the perception of an external object, is nothing but a ſtrong impreſſion upon the mind. What we call the remembrance of a paſt event, is nothing but a preſent impreſſion or idea, weaker than the former. And what we call imagination, is ſtill a preſent idea, but weaker than that of memory.

That I may not do him injuſtice, theſe are his words in his Treatiſe of Human Nature, page 193.

"We find by experience, that when any im-
"preſſion has been preſent with the mind, it
"again makes its appearance there as an idea;
"and this it may do after two different ways,
"either when in its new appearance it retains a
"conſiderable degree of its firſt vivacity, and is
"ſomewhat intermediate betwixt an impreſſion
"and an idea, or when it entirely loſes that vi-
"vacity, and is a perfect idea. The faculty by
"which we repeat our impreſſions in the firſt
"manner, is called the memory, and the other
"the imagination."

Upon

Upon this account of memory and imagination I ſhall make ſome remarks.

Firſt, I wiſh to know, what we are here to underſtand by experience? It is ſaid, we find all this by experience; and I conceive nothing can be meant by this experience but memory. Not that memory which our author defines, but memory in the common acceptation of the word. According to vulgar apprehenſion, memory is an immediate knowledge of ſomething paſt. Our author does not admit that there is any ſuch knowledge in the human mind. He maintains that memory is nothing but a preſent idea or impreſſion. But, in defining what he takes memory to be, he takes for granted that kind of memory which he rejects. For can we find by experience, that an impreſſion, after its firſt appearance to the mind, makes a ſecond, and a third, with different degrees of ſtrength and vivacity, if we have not ſo diſtinct a remembrance of its firſt appearance, as enables us to know it, upon its ſecond and third, notwithſtanding that, in the interval, it has undergone a very conſiderable change?

All experience ſuppoſes memory; and there can be no ſuch thing as experience, without truſting to our own memory, or that of others: So that it appears from Mr HUME's account of this matter, that he found himſelf to have that kind of memory, which he acknowledges and defines,

defines, by exerciſing that kind which he rejects.

Secondly, What is it we find by experience or memory? It is, "That when an impreſſion has "been preſent with the mind, it again makes "its appearance there as an idea, and that after "two different ways."

If experience informs us of this, it certainly deceives us; for the thing is impoſſible, and the author ſhews it to be ſo. Impreſſions and ideas are fleeting periſhable things, which have no exiſtence, but when we are conſcious of them. If an impreſſion could make a ſecond and a third appearance to the mind, it muſt have a continued exiſtence during the interval of theſe appearances, which Mr HUME acknowledges to be a groſs abſurdity. It ſeems then, that we find, by experience, a thing which is impoſſible. We are impoſed upon by our experience, and made to believe contradictions.

Perhaps it may be ſaid, that theſe different appearances of the impreſſion are not to be underſtood literally, but figuratively; that the impreſſion is perſonified, and made to appear at different times, and in different habits, when no more is meant, but that an impreſſion appears at one time; afterwards a thing of a middle nature, between an impreſſion and an idea, which we call memory; and laſt of all a perfect idea, which we call imagination: that this figurative meaning

ing agrees beſt with the laſt ſentence of the period, where we are told, that memory and imagination are faculties, whereby we repeat our impreſſions in a more or leſs lively manner. To repeat an impreſſion is a figurative way of ſpeaking, which ſignifies making a new impreſſion ſimilar to the former.

If, to avoid the abſurdity implied in the literal meaning, we underſtand the Philoſopher in this figurative one, then his definitions of memory and imagination, when ſtripped of the figurative dreſs, will amount to this, That memory is the faculty of making a weak impreſſion, and imagination the faculty of making an impreſſion ſtill weaker, after a correſponding ſtrong one. Theſe definitions of memory and imagination labour under two defects; *firſt*, That they convey no notion of the thing defined; and, *ſecondly*, That they may be applied to things of a quite different nature from thoſe that are defined.

When we are ſaid to have a faculty of making a weak impreſſion after a correſponding ſtrong one, it would not be eaſy to conjecture that this faculty is memory. Suppoſe a man ſtrikes his head ſmartly againſt the wall, this is an impreſſion; now he has a faculty by which he can repeat this impreſſion with leſs force, ſo as not to hurt him; this, by Mr HUME's account, muſt be memory. He has a faculty by which

which he can juſt touch the wall with his head, ſo that the impreſſion entirely loſes its vivacity. This ſurely muſt be imagination; at leaſt it comes as near to the definition given of it by Mr HUME as any thing I can conceive.

Thirdly, We may obſerve, that when we are told that we have a faculty of repeating our impreſſions in a more or leſs lively manner, this implies that we are the efficient cauſes of our ideas of memory and imagination; but this contradicts what the author ſays a little before, where he proves, by what he calls a convincing argument, that impreſſions are the cauſe of their correſponding ideas. The argument that proves this had need indeed to be very convincing; whether we make the idea to be a ſecond appearance of the impreſſion, or a new impreſſion ſimilar to the former.

If the firſt be true, then the impreſſion is the cauſe of itſelf. If the ſecond, then the impreſſion after it is gone, and has no exiſtence, produces the idea. Such are the myſteries of Mr HUME's philoſophy.

It may be obſerved, that the common ſyſtem, that ideas are the only immediate objects of thought, leads to ſcepticiſm with regard to memory, as well as with regard to the objects of ſenſe, whether thoſe ideas are placed in the mind or in the brain.

Ideas

Ideas are ſaid to be things internal and preſent, which have no exiſtence but during the moment they are in the mind. The objects of ſenſe are things external, which have a continued exiſtence. When it is maintained, that all that we immediately perceive is only ideas or phantaſms, how can we, from the exiſtence of thoſe phantaſms, conclude the exiſtence of an external world correſponding to them?

This difficult queſtion ſeems not to have occurred to the Peripatetics. DES CARTES ſaw the difficulty, and endeavoured to find out arguments by which, from the exiſtence of our phantaſms or ideas, we might infer the exiſtence of external objects. The ſame courſe was followed by MALEBRANCHE, ARNAULD, and LOCKE; but BERKELEY and HUME eaſily refuted all their arguments, and demonſtrated that there is no ſtrength in them.

The ſame difficulty with regard to memory naturally ariſes from the ſyſtem of ideas; and the only reaſon why it was not obſerved by Philoſophers, is, becauſe they give leſs attention to the memory than to the ſenſes: For ſince ideas are things preſent, how can we, from our having a certain idea preſently in our mind, conclude that an event really happened ten or twenty years ago correſponding to it?

There is the ſame need of arguments to prove, that the ideas of memory are pictures of things that

that really did happen, as that the ideas of ſenſe are pictures of external objects which now exiſt. In both caſes, it will be impoſſible to find any argument that has real weight. So that this hypotheſis leads us to abſolute ſcepticiſm, with regard to thoſe things which we moſt diſtinctly remember, no leſs than with regard to the external objects of ſenſe.

It does not appear to have occurred either to LOCKE or to BERKELEY, that their ſyſtem has the ſame tendency to overturn the teſtimony of memory as the teſtimony of the ſenſes.

Mr HUME ſaw farther than both, and found this conſequence of the ſyſtem of ideas perfectly correſponding to his aim of eſtabliſhing univerſal ſcepticiſm. His ſyſtem is therefore more conſiſtent than theirs, and the concluſions agree better with the premiſes.

But if we ſhould grant to Mr HUME, that our ideas of memory afford no juſt ground to believe the paſt exiſtence of things which we remember, it may ſtill be aſked, How it comes to paſs that perception and memory are accompanied with belief, while bare imagination is not? Though this belief cannot be juſtified upon his ſyſtem, it ought to be accounted for as a phænomenon of human nature.

This he has done, by giving us a new theory of belief in general; a theory which ſuits very well with that of ideas, and ſeems to be a natural con-

ſequence of it, and which at the ſame time reconciles all the belief that we find in human nature to perfect ſcepticiſm.

What then is this belief? It muſt either be an idea, or ſome modification of an idea; we conceive many things which we do not believe. The idea of an object is the ſame whether we believe it to exiſt, or barely conceive it. The belief adds no new idea to the conception; it is therefore nothing but a modification of the idea of the thing believed, or a different manner of conceiving it. Hear himſelf:

"All the perceptions of the mind are of two "kinds, impreſſions and ideas, which differ from "each other only in their different degrees of "force and vivacity. Our ideas are copied from "our impreſſions, and repreſent them in all their "parts. When you would vary the idea of a "particular object, you can only increaſe or di-"miniſh its force and vivacity: If you make any "other change upon it, it repreſents a different "object or impreſſion. The caſe is the ſame as "in colours. A particular ſhade of any colour "may acquire a new degree of livelineſs or "brightneſs, without any other variation: But "when you produce any other variation, it is "no longer the ſame ſhade or colour. So that "as belief does nothing but vary the manner in "which we conceive any object, it can only be-"ſtow on our ideas an additional force and vi-"vacity.

"vacity. An opinion, therefore, or belief, may "be moſt accurately defined a lively idea, rela- "ted to or aſſociated with a preſent impreſſion."

This theory of belief is very fruitful of conſe- quences, which Mr HUME traces with his uſual acuteneſs, and brings into the ſervice of his ſyſ- tem. A great part of his ſyſtem indeed is built upon it; and it is of itſelf ſufficient to prove what he calls his hypotheſis, "that belief is "more properly an act of the ſenſitive than of "the cogitative part of our natures."

It is very difficult to examine this account of belief with the ſame gravity with which it is propoſed. It puts one in mind of the ingenious account given by MARTINUS SCRIBLERUS of the power of ſyllogiſm, by making the *major* the male, and the *minor* the female, which being coupled by the middle *term*, generate the con- cluſion. There is ſurely no ſcience in which men of great parts and ingenuity have fallen in- to ſuch groſs abſurdities as in treating of the powers of the mind. I cannot help thinking, that never any thing more abſurd was gravely maintained by any Philoſopher, than this ac- count of the nature of belief, and of the diſtinc- tion of perception, memory, and imagination.

The belief of a propoſition is an operation of mind of which every man is conſcious, and what it is, he underſtands perfectly, though, on ac- count of its ſimplicity, he cannot give a logical definition

definition of it. If he compares it with ſtrength or vivacity of his ideas, or with any modification of ideas, they are ſo far from appearing to be one and the ſame, that they have not the leaſt ſimilitude.

That a ſtrong belief and a weak belief differ only in degree, I can eaſily comprehend; but that belief and no belief ſhould differ only in degree, no man can believe who underſtands what he ſpeaks: For this is in reality to ſay that ſomething and nothing differ only in degree, or that nothing is a degree of ſomething.

Every propoſition that may be the object of belief, has a contrary propoſition that may be the object of a contrary belief. The ideas of both, according to Mr HUME, are the ſame, and differ only in degrees of vivacity. That is, contraries differ only in degree; and ſo pleaſure may be a degree of pain, and hatred a degree of love. But it is to no purpoſe to trace the abſurdities that follow from this doctrine, for none of them can be more abſurd than the doctrine itſelf.

Every man knows perfectly what it is to ſee an object with his eyes, what it is to remember a paſt event, and what it is to conceive a thing which has no exiſtence. That theſe are quite different operations of his mind, he is as certain as that ſound differs from colour, and both from taſte; and I can as eaſily believe that ſound, and

and colour, and taſte, differ only in degree, as that ſeeing, and remembering, and imagining, differ only in degree.

Mr HUME, in the third volume of his Treatiſe of Human Nature, is ſenſible that his theory of belief is liable to ſtrong objections, and ſeems, in ſome meaſure, to retract it; but in what meaſure, it is not eaſy to ſay. He ſeems ſtill to think that belief is only a modification of the idea, but that vivacity is not a proper term to expreſs that modification. Inſtead of it he uſes ſome analogical phraſes to explain that modification, ſuch as "apprehending the idea more "ſtrongly, or taking faſter hold of it."

There is nothing more meritorious in a Philoſopher than to retract an error upon conviction; but in this inſtance I humbly apprehend Mr HUME claims that merit upon too ſlight a ground: For I cannot perceive that the apprehending an idea more ſtrongly, or taking faſter hold of it, expreſſes any other modification of the idea than what was before expreſſed by its ſtrength and vivacity, or even that it expreſſes the ſame modification more properly. Whatever modification of the idea he makes belief to be, whether its vivacity, or ſome other without a name, to make perception, memory, and imagination, to be the different degrees of that modification, is chargeable with the abſurdities we have mentioned.

Before

Before we leave this ſubject of memory, it is proper to take notice of a diſtinction which ARISTOTLE makes between memory and reminiſcence, becauſe the diſtinction has a real foundation in nature, though in our language I think we do not diſtinguiſh them by different names.

Memory is a kind of habit which is not always in exerciſe with regard to things we remember, but is ready to ſuggeſt them when there is occaſion. The moſt perfect degree of this habit is, when the thing preſents itſelf to our remembrance ſpontaneouſly, and without labour, as often as there is occaſion. A ſecond degree is, when the thing is forgot for a longer or ſhorter time, even when there is occaſion to remember it, yet at laſt ſome incident brings it to mind without any ſearch. A third degree is, when we caſt about and ſearch for what we would remember, and ſo at laſt find it out. It is this laſt, I think, which ARISTOTLE calls reminiſcence, as diſtinguiſhed from memory.

Reminiſcence, therefore, includes a will to recollect ſomething paſt, and a ſearch for it. But here a difficulty occurs. It may be ſaid, that what we will to remember we muſt conceive, as there can be no will without a conception of the thing willed. A will to remember a thing, therefore, ſeems to imply that we remember it already, and have no occaſion to ſearch for it. But this difficulty is eaſily removed. When we will

will to remember a thing, we muſt remember ſomething relating to it, which gives us a relative conception of it; but we may, at the ſame time, have no conception what the thing is, but only what relation it bears to ſomething elſe. Thus, I remember that a friend charged me with a commiſſion to be executed at ſuch a place; but I have forgot what the commiſſion was. By applying my thought to what I remember concerning it, that it was given by ſuch a perſon, upon ſuch an occaſion, in conſequence of ſuch a converſation, I am led, in a train of thought, to the very thing I had forgot, and recollect diſtinctly what the commiſſion was.

ARISTOTLE ſays, that brutes have not reminiſcence, and this I think is probable; but, ſays he, they have memory. It cannot, indeed, be doubted but they have ſomething very like to it, and in ſome inſtances in a very great degree. A dog knows his maſter after long abſence. A horſe will trace back a road he has once gone as accurately as a man; and this is the more ſtrange, that the train of thought which he had in going muſt be reverſed in his return. It is very like to ſome prodigious memories we read of, where a perſon, upon hearing an hundred names or unconnected words pronounced, can begin at the laſt, and go backwards to the firſt, without loſing or miſplacing one.

one. Brutes certainly may learn much from experience, which ſeems to imply memory.

Yet I ſee no reaſon to think that brutes meaſure time as men do, by days, months, or years, or that they have any diſtinct knowledge of the interval between things which they remember, or of their diſtance from the preſent moment. If we could not record tranſactions according to their dates, human memory would be ſomething very different from what it is, and perhaps reſemble more the memory of brutes.

END OF VOLUME FIRST.